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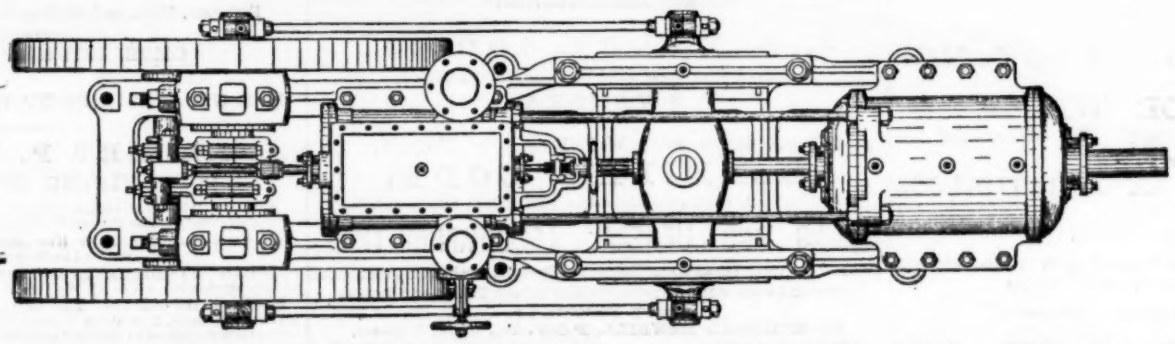

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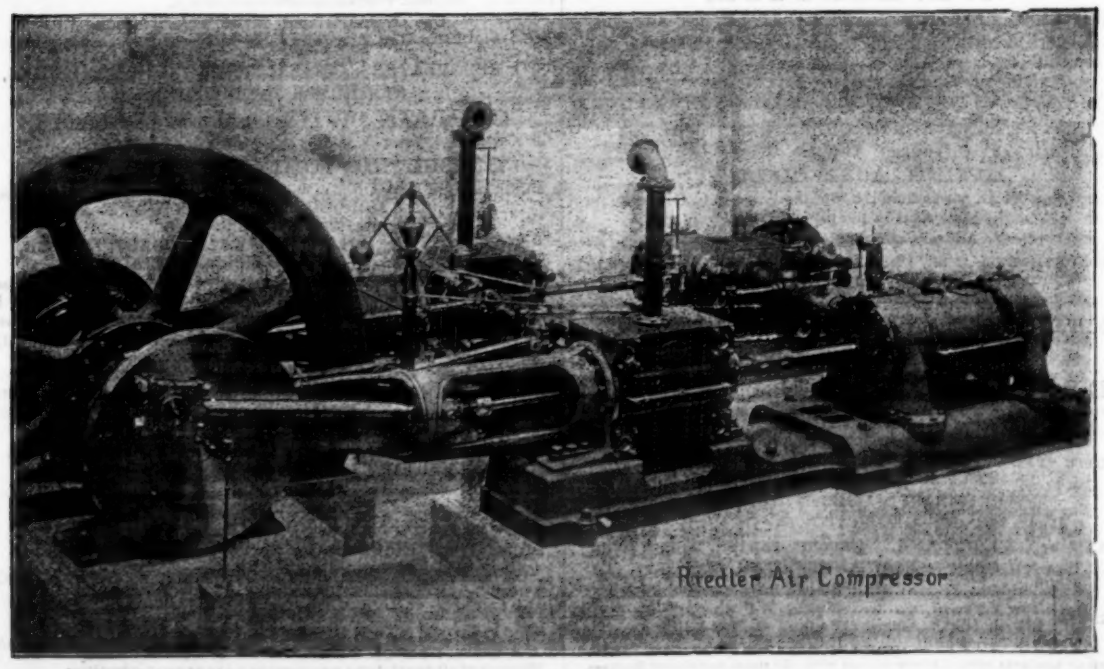
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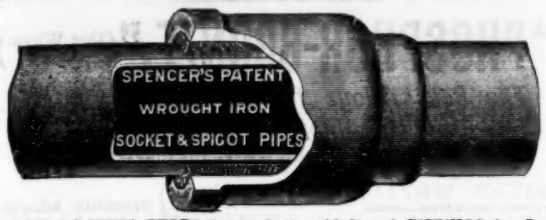

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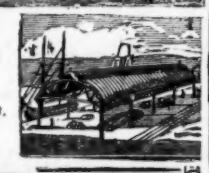

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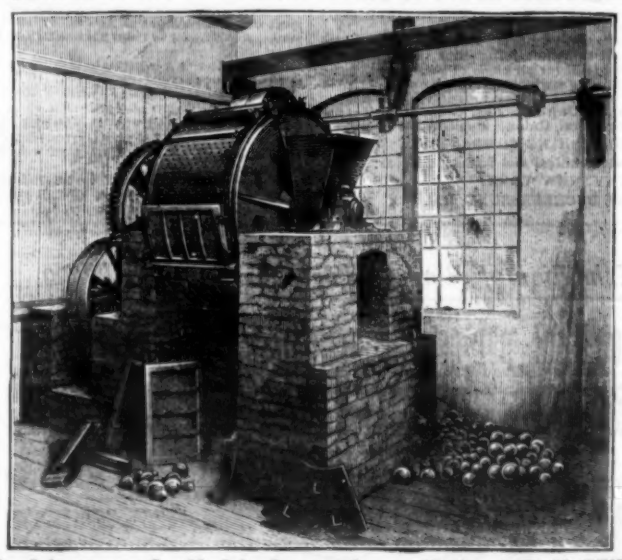

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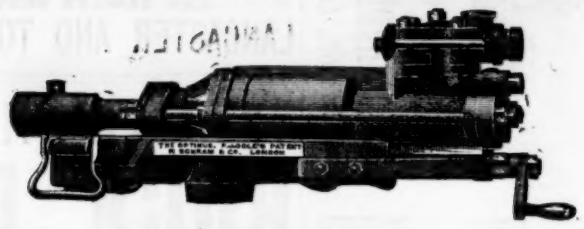
MR. P. S. HAMILTON (late Chief Commissioner of Mines of the Province of Nova Scotia), PRACTICAL GEOLOGIST, MINING AGENT and MINING ENGINEER, HALIFAX, NOVA SCOTIA, PURCHASES and SALES of MINING PROPERTY effected, with special regard to the interests of clients.

REVOLUTION IN ROCK DRILLING



"OPTIMUS" COMPOUND ROCK DRILL.

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Consumes 40 per cent. less Compressed Air than any other Drill at the same time giving the most effectual results.

AIR COMPRESSORS

WITH COMPOUND AIR AND STEAM CYLINDERS,

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TELEGRAMS "SCHRAM, LONDON," A1, A.B.C. and The Engineering Telegraph Codes Used.

From His Grace the Duke of Rutland.
Belvoir, Grantham,
December 1st, 1879.

SIRS,—Elliman's Royal Embrocation is used in my stables; I think it very useful.
RUTLAND.
Master of the Belvoir Hounds.

—o—

From the Earl of Harrington
January 9th, 1889.

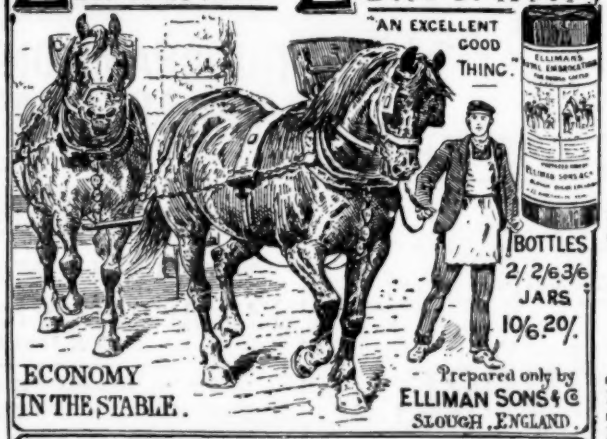
SIRS,—Elliman's Royal Embrocation is used in my stables, and I consider it the best that I can obtain. HARRINGTON.
Master of the South Wilts Hounds.

—o—

From Major M. J. Balfe,
South Park.
June 16th, 1892.

SIRS,—Elliman's Royal Embrocation is used in my stables, and I can highly recommend it.
M. J. BALFE.
Master of the Roscommon County Staghounds.

ELLIMAN'S ROYAL EMBROCATION



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HADDINGTON.
Master of the Berwickshire Hounds

—o—

From R. Burdon Sanderson, Esq., Warren House, Belford
July 10th, 1892.

SIRS,—Elliman's Royal Embrocation is used in my stables, and I consider it very useful.
R. BURDON SANDERSON.
Master of Percy Foxhounds.

—o—

From Wm. J. Buckley, Esq., Penyfai, Llanelly.
July 16th, 1892.

DEAR SIRS,—I have much pleasure in recommending your Royal Embrocation. I always keep a stock in my stables and kennels. My farm bailiff has also found it of much value among my herd.
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Master of Carmarthenshire Foxhounds.

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INVENTIONS EXHIBITION.

"PHOSPHOR-BRONZE." (Cog Wheel Brand.)

The Best Alloys for all Wearing parts of Machinery, Bearings, &c.

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Winding Indicators

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COMBINED,
As shown in Illustration.
Or either of the two separately as required.

Made to suit any Winding Engine or for hauling purposes; with Bell, to denote when to cut off steam; which can be altered in a few minutes to ring at any part required.

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Watch this Advertisement every other week.

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FIRST in GENERAL INTELLIGENCE.
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7 to 25, Bank St., Dundee; and 186, Fleet St., London.

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STRONGER AND MORE DURABLE THAN STEEL.

Specially Adapted for MINING WORK

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Is the best FINANCIAL and COMMERCIAL PAPER in the Provinces.

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Contains everything of interest and value in mining and metallurgy. The fullest mining news. The best coal, metal, and mining stock market reports.
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Booksellers and Publishers of Technical and Scientific Books.
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LONDON OFFICE: 20, BUCKLERSBURY, E.C.

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Mining men and others in all parts of the world, who wish to secure the most complete budget of Australian news, and particularly of Mining Intelligence, will do well to have THE ADELAIDE OBSERVER regularly posted to them.
Special attention is given to Mining operations in Western Australia as well as in all other parts of Australasia.
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FERRO-ALUMINIUM, ALUMINIUM BRONZE, &c.,

For Iron and Steel Workers,
Founders, Engineers,
And all Metal Workers.

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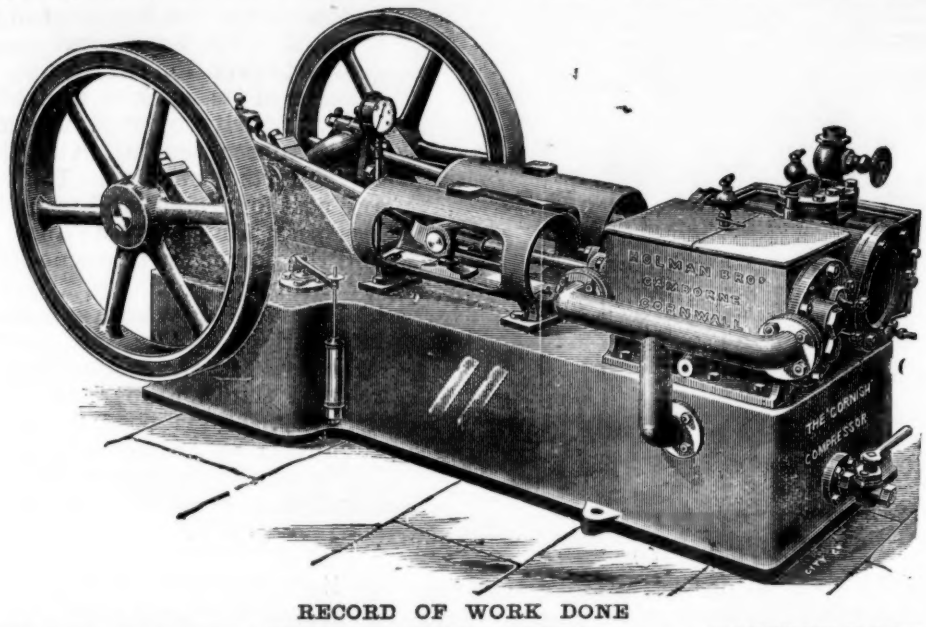
Sole Agents in Great Britain and Ireland for the Aluminium Industry, Co., Neuhausen, Switzerland.

HOLMAN Bros., Camborne, Cornwall.

ESTABLISHED 1839

Patentees and Sole Makers of

"THE CORNISH" ROCK DRILL and "THE CORNISH" COMPRESSOR.



RECORD OF WORK DONE

At Botallack Mine, St. Just, Cornwall, **TWELVE MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** drove, sunk, and rose **288 FATHOMS** in **12 MONTHS**, equal to five times the Speed of Hand Labour

At Wheal Grenville Mine, Camborne, Cornwall, **SIX MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** started from the **150 FATHOMS** level and put up in **EIGHT MONTHS** a **11 FEET** by **6 FEET PERPENDICULAR RISE 46 FATHOMS 5 FEET 6 INCHES**, and about midway drove **1 FATHOM 5 FT.** No communication of any kind was effected until holing to the Shaft brought down from surface.

Estimates for ROCK BORING PLANT and GENERAL MINING MACHINERY on Application.

London Representative: Mr. E. M. TOUZEAU, Leadenhall Buildings, London, E.C.

JOHN DAVIS & SON,

ALL SAINTS WORKS, DERBY;
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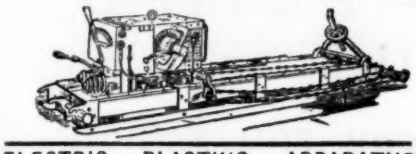
ELECTRIC LIGHT & TRANSMISSION OF POWER PLANTS

Jeffrey Machines for Undercutting Coal,

WORKED EITHER BY ELECTRICITY OR COMPRESSED AIR.

OVER 500 IN USE.

FULL PARTICULARS UPON APPLICATION



ELECTRIC BLASTING APPARATUS

HIGH OR LOW TENSION SYSTEMS.

REVISED CATALOGUE UPON APPLICATION.

SEC. A. MATHEMATICAL, MINING INSTRUMENTS, MINERS' LAMPS, &c.
SEC. B. ELECTRICAL PLANTS AND FITTINGS.

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CONCENTRATION.

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In the CLARKSON-STANFIELD process of Concentrating Refractory and Complex Ores no water is required; dust is reduced to a minimum; the loss of Mineral through water-borne Slimes is obviated.

OUTPUT ½ TO 2 TONS PER HOUR, ACCORDING TO SIZE OF MACHINE.

CONCENTRATOR TO BE SEEN IN OPERATION AT THE COMPANY'S ONLY ADDRESS:

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The Machine is superior to Sieves for Sizing Homogeneous Substances, such as Emery, Sand, and Powders, and may be used to great advantage in the preparation of Ochre.

N.B.—The owners of the Carndochan Mine, near Bala, North Wales, will, by arrangement, show their CLARKSON-STANFIELD plant working on a Refractory Low Grade Gold Ore.

CONTRACTS OPEN:

FOR MINE, QUARRY, RAILWAY, AND ENGINEERING WORK, STORES, &c.

**** We shall be obliged by being promptly placed in possession of particulars regarding contracts open for competition, and of the results of successful tenders. In the latter case contract prices should be given.*

The date given is that by which tenders must be delivered, in nearly all cases further information can be obtained on application at the addresses given. In applying for such the name of "The Mining Journal" should be mentioned as the original source of the information, concerning which further particulars are required.

HOME CONTRACTS.

Underframes, October 29 (*London, E.C.*).—For the supply of underframes and requisite fittings for the following, for the Bengal and North-Western Railway Company (Limited): 10 composite carriages (first and second class), 10 intermediate carriages, 90 third-class carriages, 20 brake vans, five horse-boxes, in accordance with the drawings, particulars of which may be obtained at the company's offices.

Sinking Well, November 3 (*Goole*).—For the sinking of a well and borehole for water at the board's pumping station at Rawcliffe Bridge, near Goole, Yorkshire, for the Goole Local Board. Specifications to be seen or a copy thereof obtained on application to the engineer, Mr. E. Muir, M.I.C.E., 37, Brown Street, Manchester, or at the board's offices.

Goods Wagons (*London, E.C.*).—For 500 railway goods wagons, to be delivered to a colonial railway during 1895 and 1896. For particulars, apply to Mr. J. A. Keiman, 251, Winchester House, Old Broad Street, London, E.C.

Cranes, November 5 (*Belfast*).—For the supply, erection, and setting to work of two locomotive steam cranes, each capable of lifting 3 tons at a radius of 45 feet, for the Belfast Harbour Commissioners. Copies of specification and tender to be obtained from the harbour engineer, Mr. G. F. L. Giles.

Various Railway Stores, November 6 (*London E.C.*).—For the supply and delivery of loco tubes, copper tubes, rods and rivets, white metal ferrules, steel bars, screw taps, zinc sheets, bolts and nuts, carriage locks, band saws, iron shoots, fireclay and bricks, leather cloth, plate glass, vulcanised rubber, transfers, watch materials, Erhardt's weighing machines, and other stores, as per specifications to be seen at the offices, for the Madras Railway Company. Tenders to be delivered in sealed envelopes, addressed to Mr. Julian Byrne, secretary, 61, New Broad Street, London, E.C.

Boring, November 10 (*Milton*).—The Joint Water Committee of the Swadlincote Local Board and Ashby-de-la-Zouch Local Board invite tenders for the work required for developing and proving the yield and quality of water at the site of their proposed pumping station at Milton, 7 miles north of Swadlincote, and 8 miles east of Burton-on-Trent, up to a quantity of not less than 1,500,000 gallons per day. Drawings and specifications may be seen at the Loughborough office of Mr. George Hodson, M.I.C.E., F.G.S.

Railway Fittings, October 31 (*London, E.C.*).—For the supply and delivery of steel tyres for carriages and wagons, laminated bearing springs, wrought iron, metals, galvanised sheets, canvas, &c., panel plates, cast steel, galvanised strand wire, beater picks, wood screws, nails, &c., trolley wheels and axles, steel tube plates for boilers, and files for the East Indian Railway Company, as per specifications and drawings to be seen at the company's offices. Tenders to be sent to Mr. A. P. Dunstan, secretary, Nicholas Lane, London, E.C., marked "Tender for Steel Tyres for Carriages and Wagons."

NEW PATENTS.

LIST of APPLICATIONS for New Patents relating to Mining Metallurgical, Engineering, Railway and kindred matters, specially compiled from official sources for the "Mining Journal" by Messrs. Rayner and Company, Patent Agents, 37, Chancery Lane, London, W.C., who will forward all information regarding them free on application.

19029 George Threlfall, 34, Portman Mansions, Baker Street, London.—Improvements in hydraulic intermittent motors.—October 8.

19112 Dugald Clerk and Frederick William Lanchester, 18, Southampton Buildings, Chancery Lane, London.—Improvements in gas and oil motor engines.—October 9

19130 Robert Henelade Courtenay, 11, Lamburn Road, Clapham, London.—An improved method of rendering the combustion of coal gas more perfect, with appliances for same.—October 9.

19145 Henry Harris Lake, 45, Southampton Buildings, Chancery Lane, London.—Improvements in and relating to valves for steam engines.—October 9.

19150 William Henry Beck, 115, Cannon Street, London.—Improvements in the method of and apparatus for the electro deposition of metals.—October 9.

19165 James Bingham Alliott, 23, Southampton Buildings, Chancery Lane, London.—Improvements in apparatus for cutting coal and other mineral by power.—October 9.

19169 Georges Louis Félix Edeline, 7, Queen Victoria Street, London.—An improved composition for the prevention of incrustation in boilers.—October 9.

19267 John Dobson Wardale, 47, Lincoln's Inn Fields, London.—Improvements in connection with pumping engines and air compressors.—October 10.

19269 John Edson Sweet, 52, Chancery Lane, London.—An improved steam and water separator.—October 10.

19272 James N. Hartzell, 40, Chancery Lane, London.—Rotary steam engine.—October 10.

19274 Harry Oscar Beckh, 24, Southampton Buildings, Chancery Lane, London.—Automatic expansion gear for steam engines.—October 10.

19330 Robert Cowie and Messrs. Dixon and Mann (Limited), 115, St. Vincent Street, Glasgow.—Improvements in apparatus for the delivery of coal or other material from the picking tables of coal or other material cleaning machinery.—October 11.

19394 Thomas Twynam Elmhurst, Egham Hill, Surrey.—Improvements in the utilisation of purple ore and other iron oxides.—October 12.

19409 James William Claridge, 79, Gracechurch Street, London.—Improvements in and connected with assisted draught for use in steam boilers.—October 12.

19423 John Henrique Dunn, 8, Spencer Road, Holloway, London.—Improvements in construction of retorts or furnaces for production of gases by the use of electricity.—October 12.

SPECIFICATIONS PUBLISHED.

13,696, Torres, metallurgical furnaces, 1893; 22,075, Parkinson and others, furnaces for welding or heating metals, 1893; 22,949, Blechynden, steam boilers, 1893; 287, Griebenow, marine engine governors, 1894; 15,241, Holloway, steam engines, 1894; 15, 587, Buechert, explosive compounds, 1894.

The above specifications published may be had of Messrs. Rayner and Company, 37, Chancery Lane, London, at 10d. each including postage.

OUR INQUIRY COLUMN.

TO CORRESPONDENTS.

Correspondents will please take note that all communications will in future be answered in this column and not through the medium of the post. All questions and replies should be accompanied by the name and address of the writer.

REPLIES.

A. W. (Bradford).—The liquidator is selling the property, and it all depends upon the price obtained for it whether the shareholders will get any return or no. The future alone will reveal this.

T. S.—We are in the same plight as yourself. We are favoured with no official information respecting the company.

G. S. B.—It appears to be a fair venture.

W. P.—We cannot recommend a purchase of the shares.

SUBSCRIBER FOR 40 YEARS.—If you will send us a specimen we shall doubtless be able to give you the information you require.

ANNOYED.—We understand that the Golden Link has at last gone to allotment.

WESTRALIAN.—(1) We are not favourably disposed towards Cassidy Hill.—(2) Get rid of your shares if possible.—(3) Yes; you would do well to purchase shares in the Consolidated Gold Mines of Western Australia.—(4) We have received favorable reports of both Blackett's and Great Dundas properties.

REX.—We cannot advise you to put money into the concern.

AFRICA.—Yes; we believe the Matabele Gold Reefs and Estates Company (Limited) to be a good investment.

The Priestman Oil Engine has been adopted by the following Governments:—The British Government, the United States Government, the New South Wales Government, the Victorian Government, the New Zealand Government, the Spanish Government, the Hungarian Government, the Norwegian Government, the Chinese Government, the Elder Brethren of the Trinity House, the Northern Lighthouse Board, the Irish Lighthouse Board, &c.

Mr. Edward Hooper, a partner in the firm of Bewick, Moreing, and Co., mining engineers, has arrived at Coolgardie.

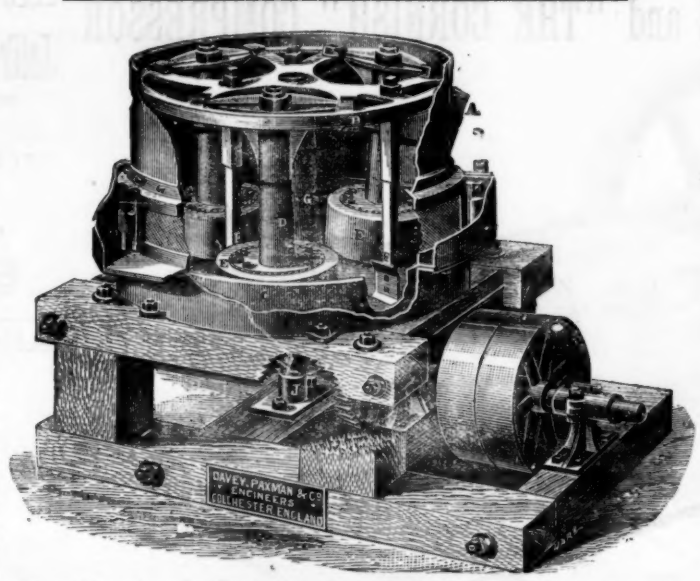
MR. RICHARD J. MIDDLETON, F.I.Inst., &c., Manager of *The Mining Journal*, was elected a Member of the North of England Institute of Mining and Mechanical Engineers at their meeting held on the 13th inst.

DAVEY, PAXMAN & Co.,
Engineers, Colchester.

MAKERS OF
ENGINES, BOILERS, PUMPS
AND ALL DESCRIPTION OF MACHINERY FOR MINING.

DAVEY, PAXMAN & Co., are SOLE Licensees and Manufacturers of the Huntington Patent Centrifugal Roller Quartz Mill for the whole World, excepting the United States of America, Mexico, and Australasia.

Telegraphic Address:
"PAXMAN, COLCHESTER."



Huntington's Patent Centrifugal Roller Quartz Mill for fine pulverizing in Concentration.

LONDON OFFICE
78 [late 139], QUEEN VICTORIA STREET.

D. P. & Co., after a great number of careful experiments have so improved and perfected the Huntington Mill that it must now be classed among the greatest inventions of the age. The excellence of its work is undoubted, and its superiority over Stamp Mills will soon cause a revolution in its favour for Quartz Crushing. Its first cost, and cost for freight and transit is much less than for stamps, it absorbs about half the power for the same output, and is continually crushing. It can be fixed and started in 12 hours, requiring for foundations only two pieces of timber 12 in. by 12 in. by 14 feet long, is more reliable than stamps, and has perfect delivery. It is used to its greatest advantage on gold quartz, for, because of its excellent amalgamating properties, it catches about 75 per cent. of the gold put into it.

Full Particulars on Application to
DAVEY, PAXMAN & Co.,
Colchester.

ELECTRICAL PRECIPITATION OF GOLD.

Paper by Mr. A. von GERNET.

AT a recent meeting of the Chemical Metallurgical Society of South Africa, held in Johannesburg, the following paper was read by Mr. A. von Gernet on the "Electrical Precipitation of Gold":—

Although the electrical precipitation of gold extracted from ores by cyanide has only recently been introduced into South Africa, it has been in use in Europe and Asia as far back as the year 1888. The author having been connected with this process from the beginning, he is thereby enabled to give some information concerning its development, based on actual working data, which may be of general interest. In 1887 Dr. Siemens found that the gold anodes used in electro-plating at his works in Berlin lost weight when standing idle in the cyanide liquor without any electric current passing through the bath. This fact, backed by the statements of chemical authorities that gold is soluble in cyanides, first induced him to try the use of a cyanide solution to extract gold from ores. In the same year he built a small plant to make experiments on concentrates, produced in Transylvania. The gold was precipitated from the solution both by electrolysis and zinc filings. It was found, however, that the zinc method gave good results with strong solutions only, while the electric precipitation was equally effective with either strong or weak solutions, and its efficiency was not lessened by the presence of caustic soda.

Dr. Siemens, therefore, decided to use electrolysis only. Early in the year 1888 he commenced operations on a larger scale, and engineers were sent out to several different countries. Two went to Hungary, another to America, and the author to Siberia. The results obtained were generally satisfactory, although, as might be expected, they varied considerably owing to the different conditions existing in the respective places, Nothing was done in this country at that time, as the patent question was not then settled. Except to mention the fact that Mr. Siemens was the applicant for and holder of the first patent in the Transvaal for the extraction of gold by means of cyanide, it is not necessary to discuss this matter, as such questions are beyond the scope of a technical paper. It would be superfluous to explain the elementary principles of electrolysis to the members of this society, but it is necessary to point out some of the reasons why such a large number of electrolytic processes have not succeeded commercially, the output from them having been larger in profanity than in gold.

As you are aware, the electric current decomposes a solution of metallic salt, the metal being deposited on the negative pole, while the metalloid is liberated at the positive pole of the electrolytic cell. In a fixed time a given electric current will deposit a certain quantity of metal, which quantity varies for different metals in direct proportion to their electro-chemical equivalents. This law holds good only for solutions strong in metal, but with very dilute solutions, as in use in the cyanide process, the current does not find sufficient of the metallic compound present at the electrodes, and, consequently, decomposition of water also takes place. For this reason to make the efficiency of the precipitation as great as possible, constant diffusion of the solution is requisite.

In order, therefore, to create an artificial diffusion a mechanical movement of the solution is important, and the most economical and convenient way of effecting this is to allow a slow but steady flow through the precipitation boxes. But it is still more important to give a very large surface to the electrodes. In fact, a better effect is obtained by doubling the number of plates than by increasing the current tenfold. For this reason it will be seen that mercury cathodes cannot be used with good results. In order to precipitate 100 tons of cyanide solution containing 5 dwts. of gold per ton in 24 hours about 10,000 square feet of surface is required. If the bottoms of the precipitation boxes were covered with mercury it would be necessary to have it at least a quarter of an inch deep, to make up for differences of level, and thus insure that the whole surface should be covered. This requires over 200 cubic feet of mercury, weighing 80 tons. Not only the initial expense, but also the trouble in cleaning up makes the use of mercury in this way as an electrode impracticable. The vertical position in which metallic plates can be placed has the great advantage of keeping the surface of the cathodes clean, as any solid matter entering the boxes in suspension sinks to the bottom of the latter, no obstruction being offered to its downward course. Sheets of solid metal (as copper) coated with mercury have also been tried, but have been unsuccessful, because the mercury, owing to the action of the current, will penetrate the copper and form a dry amalgam, which does not adhere to the plate.

To obtain a satisfactory cathode a metal must be used which will fulfil the following conditions:—(1) The precipitated gold must adhere to it; (2) it must be capable of being rolled out into very thin sheets, to avoid unnecessary expense; (3) it must be easy to recover the gold from it; (4) it must not be more electro-positive than the anode, in order to prevent return currents being generated when the depositing current is stopped. The more suitable metal for the purpose is lead, which is, therefore, used in the Siemens' process, and which meets all the requirements of the case. Not less important is the question of anodes. By the action of the current a metalloid is liberated at the positive electrode, and the latter when a metal begins to oxidise. Carbon could be used as an anode: but it will not withstand the action of the current, and soon crumbles into a fine powder, which decomposes cyanide. This finely divided carbon is in suspension, and cannot be removed from the solution by filtration. Zinc used as an anode forms a white precipitate of ferro-cyanide of zinc by the reaction of oxide upon ferro-cyanide, formed during the leaching. Similarly iron anodes form Prussian blue by the reaction of oxide of iron and ferro-cyanide.

In consequence of this reaction the amount of the ferro-cyanide in the cyanide solution does not increase. From the Prussian blue the cyanide can be recovered by dissolving it in caustic soda, then evaporating the solution, and finally smelting with potassium carbonate. This last process has been carried out only on a small scale, about 50 lbs. at a time, but a nice, clean cyanide potassium was obtained. In the treatment of tailings this regeneration of cyanide is not of great importance, but with concentrated, which decompose the solution with formation of ferro-cyanide, it will effect a considerable economy. In order to precipitate the gold from cyanide solutions only a very weak current is required—that is to say, a density of about ·06 amp. per square foot. With cathodes about 1½ inches apart four volts is sufficient to produce this current strength. The advantages gained by using such a weak current are:—(1) The gold is deposited hard on the plates. (2) The iron anodes are preserved for a long time, as their waste is in proportion to the current strength. In a plant treating 3000 tons per month 1080 lbs. of iron are destroyed in that period. (3) Little power is required; 746 Watts equal 1 h.p.; 3000 tons plant requires 2400 Watts, equal theoretically to 3½ h.p., and actually requiring about 5·0 indicated h.p. The most important feature of electrical precipitation is that it operates on the solution quite independently of the amount of cyanide or caustic soda it contains.

Precipitation by means of a chemical reaction is invariably more complete with a solution strong in cyanide than with a weak one, but with electricity is absolutely of no importance whatever. Therefore, in the treatment of tailings, very dilute solutions can be used, the only limit being a sufficient amount of cyanide to dissolve the gold satisfactorily. Moreover, however acid the solution may be when entering the boxes, the precipitation takes place equally well, the same amount of gold being recovered as from a neutral or alkaline solution. There are none of the complications arising from the formation of lime and alumina and hydrate of iron which, under similar circumstances, sometimes occasion so much trouble in the zinc process. Everyone here present is aware that a solution containing 0·3 per cent. of cyanide will dissolve gold just as effectively as a solution containing ·3 per cent., provided a longer time is allowed for treatment. In the first case the decomposition of cyanide in the tailings is much less than in the second, and a corresponding economy is effected.

The moisture in the original tailings being usually about the same as that contained in the residues, there is, as a rule, no chance to give a large water wash after the cyanide treatment is finished. The residues discharged contain 10 to 15 per cent. moisture, carrying about ·1 to ·05 per cent. cyanide solution when the zinc process is employed. This is equivalent to ¼ lb. of cyanide per ton of tailings. This loss may be reduced to 1-40th lb. by using as weak wash a solution containing only ·01 per cent. cyanide, which strength will be perfectly suitable for electrical precipitation, though difficult to deal with by the chemical method. Having described the principles involved in this process, it only remains to give some details as to the practical working results obtained at the Worcester Works. There are now in use five leaching vats of 20 feet diameter, with 10 feet staves, each holding 2700 cubic feet. One tank is discharged and filled every day. The strong solution used contains from ·05 to ·08 per cent. cyanide, and the weak washes ·01 per cent. The actual extraction of fine gold has averaged 70 per cent., while the consumption of cyanide has been ¼ lb. per ton of tailings treated.

The precipitation plant consists of four boxes, 20 feet by 8 feet by 4 feet. Copper wires are fixed along the top of the sides of the boxes, and convey the current from the dynamo to the electrodes. The anodes are iron plates, 7 feet long, 3 feet wide, ⅛ inch thick. They stand on wooden strips placed on the bottom of the box, and are kept in vertical position by wooden strips fixed to its sides. In order to effect circulation in solutions passing through the box some of the iron sheets rest right down on the bottom, while others are raised about 1 inch above the level of the solution, thus forming a series of compartments similar to a zinc box, the difference being that the solution passes alternately up and down through successive compartments. The sheets are covered with canvas to prevent short circuit. The lead sheets are stretched between two iron wires fixed in a light wooden frame, which is then suspended between the iron plates. The boxes are kept locked, being opened once a month for the purpose of the "clean up," which is carried out in the following manner:—The frames carrying the lead cathodes are taken out one at a time, the lead is removed and replaced by a fresh sheet, and the frame returned to the box, the whole operation taking but a few minutes for each frame. By this means the ordinary working is not interrupted at all, and the cleaning out of the boxes, which is necessary in the zinc process, is only required at very long intervals.

The lead, which contains from 2 to 12 per cent. of gold, is then melted into bars and cupelled. The consumption of lead is 750 lbs. per month, equal to 1½d. per ton of tailings. The working expenses, including filling and discharging tanks, come to 3s. per ton. When working on a larger scale the expenses will, of course, be reduced. After the facts mentioned in this paper it will no doubt be conceded that electrical precipitation has emerged from its experimental infancy and grown up into healthy manhood, and proved itself to be a technical and commercial success, and that it is in every respect at least as good a method of precipitation as the zinc process. Anyway it exists as a tangible fact, which cannot be explained away by argument or ignored by commercial men, who require the best work at the cheapest rate, It is to be regretted that the time available has not allowed such a fully detailed account as could be wished, but sufficient has been said, and figures enough given, to place the Siemens and Halske process within the category of practical precipitants of gold from cyanide solutions.

TIN TICKETING.

A TICKETING for tin ores was held at Redruth, on Tuesday, with the following result:—

VALUES OF ORES SOLD BY EACH MINE.

	Tons cwts.	Per ton.	Value.
Dolcoath No. 1	17 0	£40 5 0	£684 5 0
do No. 1a	17 0	39 17 6	677 17 6
do No. 1b	16 0	40 2 6	642 0 0
Carn Brea No. 1	13 0	35 2 6	456 12 6
do No. 1a	13 0	35 10 0	461 10 0
do No. 1b	13 0	35 15 0	464 15 0
do No. 2	2 0	26 7 6	52 15 0
Wheal Grenville a	17 0	40 15 0	692 15 0
do b	17 0	41 7 6	703 7 6
Tincroft	14 0	36 7 6	509 5 0
do	13 0	35 17 6	466 7 6
do	3 0	20 5 0	60 15 0
South Frances No. 1	14 0	39 0 0	546 10 0
do No. 1a	14 0	39 5 0	549 0 0
Wheal Basset No. 1	15 0	41 7 6	620 12 6
do No. 2	4 0	31 15 0	127 0 0
East Pool No. 1	15 0	34 0 0	510 0 0
do No. 2	2 0	14 7 6	28 15 0
Killifreth	16 0	37 17 6	606 0 0
Phœnix United	15 0	39 10 0	592 10 0
West Kitty	12 0	42 2 6	505 10 0
Wheal Agar	8 0	35 10 0	284 0 0
South Condurrow	8 0	41 15 0	334 0 0
Hexworthy	3 0	43 2 6	129 7 6
	281 0		£10,705 10 0

Average price per ton £38 1s. 11d.

AVERAGE PRICES PER TON.

July 10	£37	5	4	Sept. 11	£40	10 11
July 17	38	4	11	Sept. 25	40	1 1
August 24	38	0	8	Oct. 9	39	16 8
August 28	39	17	11	Oct. 23	38	1 11

SOME NOTES ON PERSIAN MINING AND METALLURGY.*

By JAMES MACTEAR.

(*Concluded from page* 1153.)

Petroleum.

PETROLEUM has been known to exist at various points in Persia, more particularly in the district bordering the Persian Gulf; but a new locality was discovered by Mr. Stahl in 1891, in the desert to the south of Semnan, an important town lying at the base of the mountains on the road between Teheran and Meshed. Under his direction a number of trial pits were sunk, and very promising results obtained.

I visited this locality with Mr. Stahl, having about the roughest day's work I have ever experienced. When we started from Semnan in the early morning the wind was blowing a strong gale, and the desert over which we had to pass for about 10 miles of the way was a mass of moving dust clouds, most of which was as fine as flour, which blinded us, and filled nose and mouth even through a handkerchief, whilst every now and then great gusts of wind would drive the coarser sand and gravel like heavy hail into our faces, and our horses get nearly mad and quite unmanageable.

We took refuse in the village of Kala, a miserable village in the desert, almost entirely swallowed up by the sand, which flows like water. The dust was so fine that it even got inside my prismatic compass. The chief man of the village told us that one or two days out of every ten they had such storms, but that they usually quieted down about mid-day.

The wells are about 6 or 8 miles beyond the village, and about 17 miles from Semnan; they lie in a complete desert, and occupy the centre of an apparent basin, which, however, in reality is the centre of a great upheaval of the strata.

The desert plains south of Semnan are separated from the oil region by a range of low hills, crossing which the view is a most curious one. The whole stretch of country to the south, east, and west seems as if a series of gigantic sand waves had suddenly become solid in the midst of a storm. Careful inspection, however, shows that the real strata are regular enough, and are lying at a very steep angle with the general direction from north-east to south-west. In many places the edges of the strata form almost vertical walls, and it was with great difficulty that we succeeded in making our way towards the centre of the depression, crossing a series of clays, marls, and crystallised gypsum.

After a mile or so we reach a point where sandstones and limestones full of fossils crop out, and here just below the sandstones there rises a series of strong springs of highly sulphuretted water saturated with salt and sulphate of lime, which form masses of incrustation of "cauliflower"-like type impregnated with sulphur, which is highly crystalline, evidently deposited from solution in the alkaline sulphide of the water.

From this point there extends for a long distance a nearly level surface of blue clay or marl, and at various points prospecting pits have been sunk to a considerable depth. The clay is very hard and tough to cut, but like the celebrated "blue" of Kimberley readily falls to pieces on exposure to the air. In many places thin seams of pure sulphur, up to a ½ of an inch thick, have been found, and a number of specimens of material of the same character as Ozokerite have also been found in the course of excavation.

The water level seems to be about 5 feet under the surface, and the water is strongly saturated with salt and sulphate of lime, and a considerable quantity of gas rising through it in all the pits.

In one of the trial parts a layer of oil about ½ an inch thick was floating on the water. The oil was somewhat dark in colour, but with a strong bloom upon it. The surface soil (if soil it can be called) is a soft porous gypsum deposit from the springs. It would seem as if considerable quantities of oil were coming to the surface, as all over this flat ground brown stains of oil could be seen, and the whole surface smelt strongly of oil.

To explore this deposit would require a series of bores, but the district is so desolate, the heat so great, and the sand storms so frequent, that it is very doubtful if anything will be done for a long time to come.

Considerable quantities of the oil could be sold after simple distillation and without any purification, as such oil would be quite suitable for the ordinary use of the natives at the present time.

The natives had already begun to take advantage of the work done here, and had been carrying off the oil in skins and selling it in Semnan for lighting purposes.

I brought a sample of the crude petroleum to England, and since my return I have had it examined, with the following results:—

Specific Gravity at 60° Fahr.= 0·920

Character of Oil.—Viscous, with dark green fluorescence.

Smell.—Harsh, indicating sulphur compounds.

Distilled without steam, and in fractions of 10 per cent., each examined, gave as under:—

Fraction:	Range of Temperature.	Sp. Grt at 60° Fahr.
1st	275° to 320° Fahr.	·827
2nd	320° to 380° „	.863
3rd	380° to 410° „	·884
4th	410° to 430° „	·899
5th	430° to 500° „	·917
6th	500° to 530° „	·930
7th	Over — 530° „	·930
8th	Over — 530° „	·925
9th	Oil cracking	·893
10th	„ „	·890

Retort residuum about 2 per cent.

From commencement to end of the distillation, strong sulphurous odour. Colour of the distillates good; from pale yellowish-white to brownish-yellow, last fractions reddish. Small residue of coke.

No purification was made of the distillates, the original sample being only surface oil, and no doubt much contaminated with sulphur from the deposits.

Copper and Zinc.

Teheran, the capital of Persia, lies just at the base of the great northern mountain range; and almost due north of the town is a great ravine, up which a rugged path leads to the village of Pascaleh. Striking off to the east, in a deep cleft in the mountain, a considerable amount of work has been done upon a large and distinct mineral vein lying between porphyry and clay slate. It is a very promising vein, but the ore is a very complex one, containing sulphides of zinc, lead, antimony, iron and copper, carrying also small quantities of gold and silver.

Many attempts have been made to smelt this ore, and a somewhat large plant was erected by the son of a Persian gentleman, but so far without satisfactory results.

The ore has little value in Persia, and would require extensive dressing plant before it could be utilised. A visit to the mine, however, gave valuable information as to the mode of occurrence of such ores, and the highly mineralised character of the mountains near Teheran.

Copper is very plentifully distributed throughout Persia, and close to Semnan is a very interesting deposit, where considerable quantities of copper have been found to exist, chiefly as carbonate, with a little sulphate as well as oxide. The ore, if found in small veins and disseminated through a clay stone which, in some cases, is still quite plastic, in others is so highly silicified as to resemble agate and jasper. It has clearly been deposited from the action of mineral waters, as there can be seen layer after layer of material permeated throughout by salts of copper. In some cases, the little seams or veins of copper carbonate are over half an inch in thickness.

Considerable work has been done here, and one of the villagers who had worked in the mine told us they were able to sell all the ore they were able to take out at a price which was equal to nearly 2d. per lb. for dressed ore—averaging probably from 20 to 25 per cent.—the poorer ores being thrown away.

The workings were very rough and irregular, but went down a considerable depth, and at a fairly steep angle layer after layer of the copper-bearing stuff being passed through with comparatively barren ground in between. The deposits are very similar to some which I examined the year before in the State of Guerrero in Mexico, where the ore occurred in precisely the same class of formation, further proof of the mineral spring character of the deposits being in each case given by the seams of crystallised gypsum which are found with the copper salts.

A series of samples which I took from the Persian mine showed an average content of from 2 to 3 per cent. of copper in the heaps of ore at the surface, while many pieces contained close on 20 per cent. There would be no difficulty in dressing the ore by hand to average 5 per cent. to 8 per cent. all over.

Further to the east, and some 70 miles south of Damghan, in a range of mountains of volcanic formation, which here border the desert, a considerable amount of work has been done by the natives in recent times. There are two deposits which have been worked extensively—both distinct veins. One of these has cut out at a short depth; the other has been extensively worked on.

The country rock is, in appearance, a mud or claystone, but microscopic examination shows it to be a dolerite. It forms the most rugged and irregular masses, and, where weathered under the influence of the hot sun, has become almost jet black, while a freshly-broken surface is more or less brown in colour.

Both walls of the vein are composed of this rock, the "filling" being a clay, in some places quite soft. The vein will average 8 inches wide, and contains good stones of grey copper, yellow ore, and a little peacock ore, with a good deal of carbonate and some sulphate of copper. A fairly good dressing floor had been constructed, and a considerable quantity of ore was lying at the surface. It was somewhat easy to examine the workings as they were in a good state, with a fair attempt at timbering in bad places, and I was able to go down some 40 or 50 feet, up to which depth the vein continued of the same character, and did not show solid ore.

No native copper was to be seen, nor could I find any information as to its having been found.

The work is all modern, the ore, after having been dressed by hand, was carried on pack animals to the village of Kuhzar, some two miles away, over a very rugged mule track, and smelted in small mud-built furnaces. Of these I found two in existence at the village, with a couple of small roasting kilns, considerable heaps of slag, and badly roasted ore lying about. The furnaces were about 4 feet high and 18 inches in diameter, and were rapidly falling to pieces. The Naib of th village informed me that there were other furnaces at various points along the base of the mountain, wherever brushwood could be had for fuel, but that the whole output for the two years had only amounted to the equivalent of about 6 tons of copper.

A considerable distance still to the eastward is the town of Abassabad, and here the country is exceptionally rich in copper deposits, native copper especially being found over a large tract of country. Many native workings can still be traced, and in some places the amount of slags indicate that an enormous amount of work has been done in former times. Sulphide of copper is also found, and the Masjedi Mine was being worked vigorously and producing from 70 to 100 lbs. of copper per day. There is great waste in dressing the ore, and probably fully one-half of the copper is lost. A large number of the old mines are to be found in this district, and enormous quantities of slag are spread over the country, but the date of the working is said to be beyond the memory of man.

What seems to be a great lode extends for more than a mile to the westward of Som-i-Karbalai-Sadekh, the ore being native copper with cuprite and crysocolla.

From amongst these mines the prospecting engineers of the Corporation had selected one situated at Gurkhani, and here a shaft was sunk and a considerable amount of work carried on. Here, and in the immediate neighbourhood, very extensive operations had been carried on by the ancients, and an enormous amount of ground turned over, and from all that I could see, I believe that the ore, when found, was of an extremely rich quality, but that the proportion of native copper and cuprite in the ground turned over was very small. Apparently the old workers abandoned their operations at an average depth of about 50 feet, but whether owing to the disappearance of the ore or from its being too poor to work beneath a certain depth, there was no means of ascertaining. The amount of water encountered in sinking a shaft was not sufficient to give trouble, and the results of working in Asia Minor have shown that very considerable quantities of water can be dealt with by hand labour, not only without difficulty, but actually cheaper than with pumping machinery, where fuel is scarce and dear.

The results of the recent explorations have shown the existence of very considerable quantities of native copper, sparingly disseminated through a rock which seems to be dolerite and associated with cuprite, but the proportion of copper is too small to be profitably worked at the present time, in a country in which the difficulties of working, want of water and fuel, and heavy cost of transport are such serious bars to successful mining work. When labour was "forced," and cost of production practically little or nothing, while the value of copper was very high, things were very different, but now the circumstances are changed, and only rich deposits in exceptional positions are likely to be worked to profit.

The metallurgical methods carried on by the natives in this district are very simple. In the case of the sulphide ores, after hand-dressing the ore is roasted in a furnace built of mud, and forming a cone about 7 feet in height, in which holes are pierced for the admission of air. At the bottom there is an opening closed with a door, through which the roasted ore can be drawn and the draught regulated. About 35 per cent. of fuel is required, but the roasting is conducted in a small blast furnace, which is of very small size, its dimensions being about 18 inches in depth and 9 inches in diameter. The blast is produced by the usual type of Eastern bellows, the chief peculiarity being that instead of the tuyere passing through the wall of the furnace near the base, it consists of a clay pipe led down the centre of the furnace, and only lasts for one operation. There are two tap-holes, one for the slag and the other for the copper. The copper produced is of poor quality, and is not suitable for anything but the rougher classes of work.

As all the cooking utensils and milk pans are made of tinned copper, the craft of the copper smith is a very important one in Persia, and in all of the larger towns the noise from their shops in the bazaar is deafening. In most cases, instead of using sheet copper from which to form the trays, basins, or cooking pots, they use small ingots of copper, which look as if they had been cooled in a ladle, and after annealing these ingots are forged out by six or eight workmen standing in a ring and striking in turn to a musical rhythm. Each shop seems to have its own tune, so that there is a constant change of sound. The chief workman, with a couple of pairs of tongs, keeps moving the metal as the forging progresses. The workmen seem graduated from small boys to grown men, and are very hard working and skilful.

The great advantage of sheet copper is now beginning to be appreciated, and the estimated consumption of this article in Persia is supposed to be from 750 to 1000 tons per annum. It is doubtful whether native made copper can compete with European sheet copper in the future, as the cost of working it into utensils is so much greater.

Gold Deposits.

I have little doubt that rich gold deposits exist in Persia, although I was not fortunate enough to find any of them. I visited, however, three districts in which gold bearing ground has been worked, and I also found at several points on my journey what I consider to be most promising indications of gold.

At the request of His Majesty the Shah I visited the so-called Gold Mine of Kuhzar, lying to the south of Damghan, in the same range of mountains as the copper mine I have already mentioned. His Majesty seemed to consider that this was a rich mine, and evidently had considerable expectations from it.

On reaching Semnan, I had an interview with the Governor of the district, to whom I had a letter from His Majesty the Shah, and he informed me that some 20 years ago much work had been done upon the mine, but that it cost 10 tomans for every nine tomans worth of gold obtained. Pits were sunk 5 or 10 metres deep, and a layer of irony sand and soapy stone (no doubt pipe clay or kaolin) was then found. This layer contained the most gold, and was from 1½ to about 6 inches thick. Some nuggets were found up to 1 ounce in weight, but most of the gold was very fine.

After a good deal of calculation, rendered necessary by the variety of weights used in Persia, we found that his results had been from hand-washing about ¼ an ounce to the ton.

Proceeding to Damghan, I visited the mine and found it to lie about 4 miles to the east of the village of Kuhzar, where the volcanic range of mountains to the south give place to porphyry, granite, trachyte, and blue slate. The foothills slope very gently down to the Kavir, and are much cut up by deep gulleys, and there is practically no water or cultivation, except at one point where a scanty spring enables an attempt to be made at irrigating some small patches of ground. On either side of a mass of granite rock are small valleys, separated by a ridge of alluvial clay and stone, and at the head of the most westerly of these is a small pond of water fed by a small underground channel, bringing a scanty supply of water from the base of the mountains. The available supply would not have filled a ½ inch pipe, barely sufficient for even a test washing of the ground.

The foothills are composed of deep alluvial clay and stones in distinct layers, and the portion of the ground proved to contain gold includes the two main valleys with the dividing ridge; over all this distance, extending to about 4 miles by 2 miles, gold has been found. These valleys run down from each side of the granite mountain, and in both of them much work has been done by trenching and sinking pits and shafts. While, no doubt, the whole of the alluvial is more or less gold-bearing, there is a distinct layer of hard clay or stone, clearly defined, and found at a depth of from 10 to 30 feet beneath the surface level, as can be clearly seen from the many shafts or pits which have been sunk to this "pay streak."

Much work has been done, and a large portion of the valley has been worked over, the system adopted being to sink a small shaft to the streak and then excavate it away all round, as far as possible, before the ground caved in. Most of the excavations have fallen in, and the ground is covered with a series of these depressions, indicating roughly the amount of work done below.

I found the "pay streak" to be distinctly marked by fine layers of different coloured soil, both above and below, and to run from 18 inches to 2 feet thick in a number of the shafts which I was able to get into.

I made a large number of washings of ground from various parts of the field, and found, in almost every case, gold to be present, in some cases to the extent of about 2 dwts. to the ton of dirt, and I estimated the average amount as fully equal to 1 dwt. to the ton. As, however, the "pay streak" was composed of about 50 per cent. of stones, 25 per cent. of gravel, and 25 per cent. of material passing a ¼-inch sieve, the material, after a rough sifting, might be expected to run between 2 and 3 dwts. The gold was rich in colour, and evidently comparatively pure.

The character of the deposit is such that it could not be mined safely with explosives, the soil forming the roof of the working being too unsafe; it would, therefore, if worked on any large scale, require to be mined by open cast working, which would entail the removal of much barren ground, and the cost would be too great to leave any chance of profit.

Although there is no available water, I have no doubt that a dam could be readily formed in the mountain gorges behind, at such a height as to give a sufficient pressure for working this ground by the Californian hydraulic system, and if such a water supply could be obtained I believe this ground could be worked over with very handsome profit, and at a minimum cost.

The gold deposits of Kavend, of which I had heard a great deal, and where I found a very large amount of work had been done, were very disappointing. I washed a great many samples of what was supposed to be the gold-bearing ground, and got plenty of black sand, but not a single "colour."

We learnt from the chief of the village that, over 20 years ago, several hundred men were at work here for six months, and that, amongst other things, they built a very good road winding up from the valley to where great trenches and excavations had been made in the side of the mountain. About 15 years ago three Europeans camped and worked at the mine for nearly nine months, and, in all, the mine has been visited five times by Europeans. One of the villagers had worked in the mine for six months, excavating and also washing. The earth sought for was a soft ochry material found in fissures of the rock, which appears to be either a quartzite or more probably a hard silicious sinter, covered with the lime deposit from mineral springs, so extensively found in this north-western district of Persia. The material was crushed with hammers, and washed in shallow pits dug in the soil and lined with carpet. The sands thus obtained were then washed secretly by the Europeans in small basins, but he never saw any gold. As he expressed it to me,—"Many tomans were offered to any man who could find a certain kind of rock of which the Europeans showed specimens, and much work

* Extracts from a paper read on Wednesday evening, October 17, before the Institution of Mining and Metallurgy.

was done in looking for it, but the rock was never found, and the tomans were never obtained."

Very large quantities of this ochry clay were to be seen in the old workings, but if any gold exists in it, it was in a condition too fine to show by hand-washing.

I have already spoken of the very great amount of gold-washing that has been carried out in ancient times in the Zarshuran valley, but I had no opportunity of examining any portion of this district myself; indeed, I am exceedingly doubtful as to anything being found without sinking a regular series of prospecting pits through the present alluvial of the valley. On the road, however, between Zenjan and Kasvin, I found a large mass of conglomerate, very much of the same type as that now being so successfully worked in South Africa, and a trial washing of a small quantity of this gave me two good-sized "colours" of gold. Unfortunately I had to press on, and had no further opportunity of carefully examining this ground.

To the west of the lead mine mentioned at the beginning of this paper, many quartz veins are to be found traversing the clay slates, and a careful investigation of this part of the country would, in all probability, lead to the discovery of gold-bearing veins.

THE DISCUSSION.

Mr. Morring expressed his obligations to Mr. Mactear for his very interesting budget of notes on Persian Mining and Metallurgy. To himself the communication had been of exceptional interest, because of his connection with the industry of that country, though certainly he laboured under the disadvantage of never having been to Persia. At the commencement of his own researches into Persian mining he had been struck with the rather wild notions entertained by the local engineers as to the value of their deposits; while Mr. Mactear's remarks conveyed pretty clear indications that Persia at present was not a very promising field for the British capitalist There seemed to be no indications of a forthcoming mining boom in Persia; not, in any case, until the gold discoveries were better established than at present. The passages about the lead mines near Ganjabad were extremely interesting; but lead unfortunately in these times had sunk to such a price as barely to pay its transport, and where it had to be carried for thousands of miles on the backs of camels there was very little profit to be made. Lead in Persia, then, was not the sort of thing to excite speculation at present. Mercury, too, was somewhat in the same category. A great deal of money had, to his knowledge, been spent on developing theoretical deposits of metal in the country, and the results had been not at all commensurate. Mr. Mactear's excellent account of the petroleum discoveries near the Gulf of Persia was sufficient to prove that the Standard Oil Company were as yet in no danger of being ruined by competition. The facts reminded him somewhat of the discoveries a few years ago, near the Red Sea. He was employed to advise in the matter, and sent down the most competent man possible to examine the deposits, but only a few gallons of petroleum were ever obtained. Petroleum in Persia seemed to be something like petroleum in the Red Sea. The places were not very far distant from each other—(laughter)—and perhaps the deposits were connected. From Mr. Mactear's description copper and zinc appeared to be on the same level as the other deposits in the country. The difficulties of working any copper mines there might be in Persia without roads and markets put them for the present out of the question. The possibility of gold deposits in the Empire were, for him, the most interesting question opened by the paper, and he was surprised that Mr. Mactear should have expressed so strong a conviction that there was gold in the country. Personally, he did not share this hopeful view; but, as already remarked, he had not been in the country, and so might be mistaken. In any case, for a Persian gold mining boom, something much more hopeful was required than anything to be found in the paper read that evening. Already rather sceptical as to the value of Persia as a mineral producing country, he had been confirmed in this view by what Mr. Mactear had said.

Mr. J. H. Collins had never been within some distance of Persia, but perhaps he might be permitted to make a few remarks on the very interesting and suggestive paper which had been submitted, and first of all as to the deposits of tin. It was quite evident that Dr. Riach, who had been quoted, did not know tin, and he very much doubted whether Mr. Rowe knew much about it, though he was a mining man. Probably it would at present be very hard to get anybody to believe that the deposit found in 1837 was really a deposit of very rich tin ore. As to the lead for local consumption they could easily see how it would pay to get the small quantity required there. It seemed the men there were getting 2½d. a day, and a pound of lead would be worth 1½d., or say £14 per ton, which, as compared with home prices of labour, would be equal to a price in England of nearly £400 per ton. Obviously it would not be possible to export any lead because the transit would eat up the value, and a great deal more. He had been very much interested in the ingenious method adopted in the country for washing out the carbonate of zinc from the carbonate of lead. From the analyses Mr. Mactear had submitted, it was quite clear that this was an effective method where there was very cheap and moderately skilful labour; for simple as the process seemed to be, there was no doubt skill was required on the part of the operator to wash away the carbonate of zinc and to avoid washing away the carbonate of lead. He was inclined to doubt whether, as Mr. Mactear anticipated, European sheet copper was likely to displace the locally made ingots of copper, unless, indeed, the sheet copper were of very much better quality, because for beating out pots and pans, as was the case in India, Burmah, Spain, Portugal, and in many other countries, sheet copper was practically useless, whereas ingot copper could be beaten out and would give a much better article. Papers like the one submitted, giving the personal experiences of mining men in out-of-the-way countries, were highly interesting and suggestive, as showing what could be done, sometimes with very great success, under local conditions. The little smelting furnaces, such as were found in many countries, in Burmah, in Persia, in Mexico, were often constructed in the rudest possible manner, and yet to meet the purposes for which they were made were very effective. He remembered seeing in the Sierra Madre a furnace built for operation at a cost of $15, the unburnt bricks costing $3 and the labour $12. This furnace would cupel a ton of lead in 24 hours, consuming half a cord of wood. If they would take the trouble to work out the figures concerned they would find that the furnace did not work at all badly. Four men would manage it working 12 hours each, two men at a shift. Working on small deposits of argentiferous galena in such places as this it would have been impossible to use a modern furnace, and the one described worked very successfully indeed, Another instance he might mention of the application of a simple method of meeting a temporary difficulty occurred at a place where his eldest son was working two ordinary water jacket furnaces on copper ores. By a kind of mishap, such as sometimes happened, a chill of the copper occurred in the bottom of one of the furnaces, equal to about ¾ ton. Some of the men accustomed to Adobe furnaces built one round the chill, and it was run down very nicely at a small expense. In conclusion, Mr. Collins expressed his thanks to Mr. Mactear for his very interesting paper.

Mr. D. A. Sutherland thought there was little doubt as to the value of the petroleum deposits; the only difficulty appeared to be that of transport.

Mr. Claude Vautin appealed to the lecturer to give a little further description of his visit to the larger towns of Persia.

Mr. Joseph Garland regretted not having had a little time to go quietly through the paper, which contained so many points of interest about a country which many of them, he presumed, had not visited. He had been especially struck with the rude and primitive way of dressing the ores in that country. One of the appliances described by Mr. Mactear, however, very much resembled the Welsh flat baddle, which consisted simply of a rectangular inclined plane set on the ground, the water coming in at the head, and the ore to be washed stirred against the stream by a wooden rake. The Welsh flat baddle was constructed of wood, sometimes lined with sheet iron, whereas the Persian contrivance was of stone. He gathered from the paper that the matrix was of clay, and, therefore, easily separable from the ore. He agreed with Mr. Collins that the Persian miners showed considerable skill in being able to separate so completely the white lead ore from the calamine by a primitive process of washing. There was nothing surprising in the fact that many deaths occurred from the miners working underground in foul air places where a light could not be carried. In Cornish mines the men never ventured to work where a candle would not burn. It was possible to go a little beyond that point, but not without serious risk. He had been much interested in Mr. Mactear's reference to the orpiment lodes, as it had recalled to his mind the cinnabar vein, containing good specimens of realgar, which he had examined in New Caledonia. He would only say, in conclusion, that it was very evident they must not go to Persia to acquire the art of modern mining; at the same time, it was very interesting to learn how the miners of that country managed to raise the mineral and extract the ore therefrom.

The Chairman characterised the paper as one of the kind they were anxious to get at the Institution, embodying, as it did, the observations made on the spot by competent men. There was little of a valuable nature that he could add to the discussion, but perhaps Mr. Mactear, in his reply, would give some further information about the petroleum deposits, which appeared to be of a fairly good character. From what the author had said they were evidently situated in a very unpleasant position, where it was difficult to get at them, and so it was not quite clear how far they had been examined.

Mr. Mactear, in his reply, said his paper had been taken rather more seriously than he had intended: it was merely a series of rough notes of his impressions—or rather a very small part of his impressions of the country. Many of the points he had mentioned would have easily borne elaboration into a paper, but he had thought that the advantage of the Institution would best be served by a general paper of the kind he had submitted. (Applause.) To pass in review the remarks that had been made, Mr. Moreing, of course, had the advantage of as close an acquaintance with Persian mining as could be effected in this country. As one of the directors of a Persian Mining Company, he (the speaker) had gone to the country to test by personal inspection the reports of the local engineers, and the general conclusion as the result of his visit was that, although minerals were plentiful and in many cases rich enough to pay for working, yet as there were no consuming centres and an entire absence of any reasonable kind of transport it would only be a very exceptional kind of mineral deposit that could possibly pay—one which would not only satisfy the individual wants of the country, for they were almost nothing, but one whose ores would bear the cost of transport to some of the European ports. Only three or four minerals would do this. Quicksilver was the metal mainly before the speaker when he went to the country, and certainly if a rich deposit were to be found it would bear this cost. Gold would similarly bear the expense of transport, and if the wonderful tin deposit referred to had been in existence that would also have borne these charges. The transport question was a very difficult one, for the largest mineral districts were situated in the two northern corners of the Empire, almost out of the Persian territory, and as Russia entirely prohibited transport through her grounds, the material would have either to be taken through Turkish territory or brought down an enormous distance to the head of the Persian Gulf. An idea of what this would mean might be gathered from the fact that from the Afshar district, where the deposit of quicksilver was being sought for, to Bagdad, would have taken about 20 days by mule carriage and would have cost about £2 per mule. Each mule could only carry two bottles of quicksilver, so that each bottle would thus far upon the journey have cost £1. After this the freight from Bagdad would have to be met; so it was evident that only an exceptionally rich deposit would admit of mining operations being carried on at a profit. Mr. Moreing had certainly gone too far when he said that no mercury was found in the country. Mercury, on the contrary, was discovered in no fewer than six places, and in such quantities as fully justified the engineers in recommending further search. It was curious that in every case where mercury was found, it was found in or near villages, yards or stables, or in any case what had been inhabited ground, where there was every chance for the action of the decomposition of animal matters, and the result would be, if there were small particles of cinnabar disseminated through the ground, to facilitate the formation of native mercury—and he was very strongly of opinion that the mercury had been formed entirely by decomposition. Over a large area, certainly of greater extent than 100 square miles, cinnabar and native mercury had been found, but even a rich deposit of mercury could hardly be worked at a profit, for fuel was conspicuous by its absence, and if one tree was met with in a day's march, certainly there were not more to be seen, and that was covered by the natives with rags as a charm to keep off the evil eye. Now they were beginning to plant timber for mining operations, and soon every mining district would have its poplar trees. Before leaving the question of cinnabar, a word might be said about the lime deposits of the country, for though the speaker had been pretty well over the world, he had never seen anything of the kind before. The nearest approach to it to be met with was in the neighbourhood of the hot springs in New Zealand. The deposits, of which there were photographs in the room, occurred often as huge cones, some of them over 450 feet high. The surrounding country was covered with one vast sheet of lime deposit. This made it very difficult to get at the backbone of the country, and threw obstacles in the way of prospecting. In regard to petroleum, what Mr. Moreing had said as to the deposits was true of the Gulf district of which he was speaking. But some 2000 miles away from it there were indications of petroleum which would well repay further exploration. The Caucasus district was especially rich in copper, zinc, and sulphate of soda, which were being exploited by the Russians, and the continuation of the same sort of country into Persia was a known fact. At the same time, until there was some further consumption in the country itself, there was little of a serious character to be done in connection with mining there.

A cordial vote of thanks to Mr. Mactear, submitted from the chair, was carried by acclamation, and the proceedings terminated.

The Mica Mines of Chota Nagpur.—The mica mines worked in this part of the country are all situated in the Giridih subdivision of the Hazaribagh district. The majority of these are in the Kodarma Government estate, both inside and outside the Government reserved forests, and the rest are scattered over portions of *gadis* Gawan, Domchanch, Khesmi, Musnudih, Byres, Doranda, and Satgawan. The majority of the mines situated within the above-mentioned *gadis* are worked by Messrs. Christian and Company. During the past year 15 new mines, covering an aggregate area of 22·57 acres within the Kodarma Government estate, were settled by the Deputy-Commissioner of Hazaribagh at an aggregate rental of Rs. 1252 per annum. The aggregate current demand of the rent due to the Government amounted to Rs. 9692, out of which Rs. 9554 was realised, and only Rs. 137 remained due from one lessee. The total output of all the mines, whether situated within the Government estate of Kodarma or in the estates of private zemindars, was 3086 maunds 25 seers, against 2236 maunds in the previous year.—*Indian Engineering.*

Another marvellously rich find was made 65 miles to the N.N.E. of Kurnalpie on August 12, and about 5 miles from Peake's find, where there is also a phenomenally rich reef. This last discovery was made by Captain Barre, of Barre, Eliot, Lindsay, and Co., and has been pegged out 5½ miles along the line of reef. The stone is beautifully lined with gold. Seven distinct reefs run right through the whole property, which has been proved to be as good at both ends as it is in the centre. Though the stone is hardly as rich as that of the Londonderry, it is excellent for dollying purposes, the yield of dollied gold being more than sufficient to cover the cost of working so far.]

MEETINGS OF MINING COMPANIES.

VAN RYN GOLD MINES ESTATES, LIMITED.

A hopeful look-out for the property.—Enhanced value of the shares.

The first ordinary general (statutory) meeting of the Van Ryn Gold Mines Estates (Limited) was held on Tuesday, at Winchester House, the chair being occupied by Mr. F. A. Gillam.

The Secretary (Mr. Hogg) read the notice convening the meeting.

The Chairman said: Gentlemen, this, as you know, is only the statutory meeting of the company, and it is held within four months of the company's registration, in compliance with the Act. The meeting has been deferred as long as possible in the hope that your Chairman would be present; but Mr. Bewick, who has a thorough knowledge of the affairs of the company, has, I am sorry to say, only recently risen from a bed of serious sickness, and at the last moment has been prohibited by his doctors from being present. I will, therefore, endeavour to fill his place, and read you the remarks he has made for your information. The capital of the company is £160,000 in 160,000 shares of £1 each, of which 105,000 have been issued under the agreement which was passed at the winding up meetings of the old company, and 50,000 shares have been allotted to the shareholders in the old company. A new issue of 55,000 was made, which was guaranteed at par, of which 50,000 were offered to the shareholders in proportion to their holdings, and they took up 21,912; the remainder, being 33,088, were taken up by the guarantors, who, under the agreement already referred to, have the option for one year to take up the remainder of the unissued capital of the company at par. The new company is formed, and the whole of the capital subscribed without appealing to the public, and without costs other than the ordinary registration fees, legal and similar charges. Nearly all the money has been paid up, and the liabilities of the company on taking possession of the property and works have been paid off. Except ordinary current liabilities, the company is free from debt, and there is a substantial balance at the company's credit. At the outset there was necessarily some delay in arranging the new organisation for the management of the undertaking in South Africa. This arose from the fact that two of the members of the local committee in Johannesburg named in the Articles of Association were in this country. Now, however, two of them are on the spot, and the third will be so in the course of a week or two. The management of the mine has now been taken over by the newly-appointed committee, who will look carefully into all matters bearing on the management, finance, and development, and report to the board at the earliest possible date. The recent cables received, which you will have seen published in the London papers, are very satisfactory. The working for September, as you know, has given a profit of £1535 from the mines, and £810 from the cyanide works. The principal underground operations are now centred in mine No. 4, and here the main shaft is being deepened below the third or 390 feet level. This level is also being extended by machine drills to the east and west on the reef, opening out stoping ground in both directions. Here the developments are encouraging; the supply of ore is well in advance of the mill requirements, and this position will be maintained. Mine No. 8 has contributed ore of a good quality, and as development proceeds it is expected it will add materially to the supply of ore for the mill. This mine is near the southern side of the property, and in it are the reefs worked in the Modderfontein Mines, where rich rock is being extracted. The main shaft is down to the first level, and is being driven both east and west. At mine No. 1, which adjoins the Kleinfontein Company's ground on the east, operations of a limited extent were some time back carried on, but subsequently suspended by the late company. Within the last few weeks, however, it was decided by the local committee to resume operations at this point, and the result so far is by the cablegram received on the 17th inst. to the effect that leaders 4 inches wide had been struck, assaying 6 ounces of gold per ton; this is most encouraging. With regard to machinery and plant, the rock drilling plant is being gradually got into operation Seven drills are at work, and compressed air for two more drills is leased to the Modderfontein Company at a remunerative rate. Ore sorting apparatus has recently been installed, and is doing good work in improving the quality of the ore passed through the mill. In all probability, additional plant will be required for the various mines on the company's property, which so far have only been partially developed, and which the board hopes to gradually put on a producing basis. In connection with the cyanide plant the company has been somewhat unfortunate. The contractor who undertook the erection of the entire plant and the subsequent treatment of the tailings became financially embarrassed, and was obliged to place his affairs in the hands of trustees. The company has, however, taken over the plant, and is now working the process under the original contract, There is a substantial return from these operations. The directors are sanguine of satisfactory returns as soon as the plant is in full working order. Your directors, having reason to believe that the present 50 stamp mill is inconveniently situated and of a somewhat antiquated and imperfect type, think it may, in the interests of the company, be desirable in the course of a few months to erect a larger and more complete mill, which will result in an increase of output and economy of manipulation. This requires great consideration with regard to outlay and results, which points your board will not fail to keep in view, The recent returns and mail and cable advices from the property are considered by the directors as very satisfactory, and justify them in the opinion that a bright future is before the undertaking

Mr. Cox More understood that the whole of the capital was no issued.

Major Cotton enquired when it was expected that the cyanide plant would be at work. Perhaps it would be as well if, upon the occasion of the next meeting, one of the many excellent plans of the property in the possession of the company were to be hung from the walls. He certainly believed the property of the company to be a very valuable one, and he was heartily glad that his prediction as to the rise in the value of the shares had been verified. At the same time, he could have wished that the Van Ryn shareholders should have been enabled to take a larger interest in the property without the intervention of any outsiders,

The Chairman said that of the share capital 105,000 shares had been issued, which left 55,000 still to be dealt with, and the guarantors of the first 55,000 had the option of purchasing these at par 12 months from the date of incorporation. The cyanide process had already been in use for some time, and resulted for the last month in a profit of £810. They were hoping for better results in the immediate future, for it was well known that a cyanide plant did not do itself justice at the start. Major Cotton's favourable view of the future of the company was wholly shared by the board of directors, who were convinced that it had a most successful future before it.

A vote of thanks to the Chairman, moved by Major Cotton, terminated the proceedings,

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Good gold has been struck in the Brown Hill south shaft, Coolgardie, at a depth of 37 feet.

A dispatch, dated Cue, 9th September, says the following are the latest Marble Bar crushings:—Ironclad, 40 tons for 60 ounces; Augusta, 100 tons for 230 ounces; passed over Big Schist, 17 tons for 14 ounces 10 dwts.; Last Chance, 15 tons 13 cwts. for 14 ounces 2½ dwts.; The General, 19 tons for 35 ounces; The Pinafore, 9 tons for 16 ounces 12 dwts.; Cooper and Jordan's Big Schist, 26½ tons for 13 ounces 14 dwts.; Premier, 14 tons for 41 ounces. The latest crushing news from Bamboo Creek is as follows: Mount Prophecy crushed 87 tons for 262 ounces. A complete crushing plant for Mount Prophecy is on board the *Eddystone*.

WHEAL BASSET.

Loss of £57—The proposed new shaft.

A thirteen weeks' meeting of the shareholders in this mine was held on Tuesday, on the mine, Mr. FRANK OATS presiding.

The accounts showed: Debit—Labour pay, £3330; coal, £1190; other supplies, £647; Mrs. M. M. R. Gordon, £4; Stannary assessment, £10; total debits, £5184. Credit—119 tons 18 cwts. 7 lbs. of black tin sold, realised £5040; extra carriage, £2; discounts, 59; sand leavings, £15; spare materials, £8. The credits totalled £5126, and left a loss on the thirteen weeks' working of £57 5s. 5d. The balance against the adventurers was £125.

The committee reported the sale of an increased quantity of tin, amounting to 16 tons 13 cwts. 5 lbs., and £748 in amount realised. The average price had been £42 0s. 9d., against £41 11s. 6d, for the previous quarter. The quantity of tin stone stamped had been 6180 tons, as compared with 4885 tons last time. The cost of coal showed a small increase of £10, whilst in the merchants' bills a saving of £295 had been made. With the present very low price of tin, it was a matter of congratulation that the mine so nearly met cost. The committee considered the loss of £57 should be carried to the debit of the next account.

AGENTS' REPORT.

230 end west, on Wheal Basset lode, is worth £12 a fathom. Driving by boring machinery at £9 10s. per fathom. 230 east on Flat lode, driving at £4 and 3s. 6d. a ton. Producing stamping work. A stope in bottom of 230 is worth £20 a fathom. Stoping at 5s. a ton. A stope in the back of the 230 is worth £10 a fathom. Stoping at 3s. 6d. a ton. A stope in the back of the 230, £7 per fathom. Stoping at 5s. Stope working at the 230, £3 a fathom. 4s. a ton. A rise in the back of the 230 fathom level, Wheal Basse lode, is worth £19 per fathom. Rising at £4 per fathom. A stope in the back of the 230, Basset lode, is worth £12 per fathom. Stoping at 40s. 220 end, east of winze, worth £12. Driving at £9 and 5s. a ton. A stope in the bottom of the 210 £13. Stoping at 4s. a ton. A stope working in the back of the 210 £14. Stoping at 5s. 210 end, east of rise, £10 per fathom. Driving by boring machinery at £9 10s. 220 end, west of main cross cut, south part of lode, driving at £3 per fatham. Lode poor at present. 20 end west, driving by boring machinery at £7 producing stones of tin, but nothing to value. Stope working in back of £180 £3 per fathom. Stoping at 2s. 9d. a ton. Stope in back of 170 £12. Stoping at 5s. Stope in back of 170 £10. Stoping at £3 10s. per fathom. We have at present 122 men working on tutwork. Also three pitches working on tribute by seven men at 12s. In the £, standard £40 per ton for black tin. Total emoloyed in every department underground, including shaftmen, timbermen, trammers, and fitters, 144 men.—WILLIAM JAMES, CHARLES CLEMENS, JAMES ANDREW.

The CHAIRMAN, in moving the adoption of the accounts, committee and agents' reports, said he thought he might congratulate the shareholders on the fact that they were in no worse a position than that of having lost £50 with the price of tin so w e k dly low. At the last meeting there was a loss of £1200, and the manager told the committee at the time that that was largely caused by the lets and hindrances caused by the water, which had prevented them from returning a quantity of stuff which had accumulated underground, but that had now come in and accounted for the apparently satisfactory account. He was afraid their position was not so good as the statement of accounts would encourage them to hope, because that quantity of stuff had now been stamped. He hoped he was not taking too pessimistic a view, but they were facing another quarter with the price just as low as ever, and they felt that in order to develop the mine it was better to spend a little more money, than to try to make the mine pay at the expense of curtailing the development, and so bringing about worse trouble still. The agents' report was fairly encouraging, and the mine was to-day looking as promising as it had done for some time. Last quarter he told them that they had a piece of tin ground in the bottom of the 230 of a certain length, which, although fairly good, was not long enough with the present low price to encourage the committee to recommend the shareholders to sink a new shaft and put up increased pumping appliances, and that they hoped to discover in the western ground longer bunches of tin, which would warrant them in approaching the shareholders. They had now driven somewhere about 25 fathoms to the westward on one of the lodes, which was turning out stuff quite equal to the average of the mine for years past, but they required some demonstration of the longer length of tin ground to justify the committee in asking them to subscribe the money that would be needed for the further development of the mine. Of course before they commenced such a work they would like to know what the cost was going to be, and they would be glad if some of the large contractors, who were courageous in the matter of taking contracts, would make proposals as to that matter, as it might limit the total cost to the adventurers. He had seen it stated that Wheal Basset was not vigorously worked, but he did not know any mine in the county where, comparing the amount of tin returned, such a large proportion of money was spent in purely development work. (Hear, hear.) They had three rock drills working, and he was sorry they could not spend more money in that direction; and he would not be behind others who may propose to increase the drivage provided his pockets will stand it. The difficulties of their position had increased owing to the closing of surrounding mines augmenting Wheal Basset's water, but the mine is standing as a beacon of promise amid the waste and depressed tin mines. (Hear, hear.) Unless tin advances, he feared, they will have to face some slight calls, but the manager was extremely pleased that one quarter they could meet without having to make a call—(hear, hear)—and for this they were much obliged to Captain James in this trying time. (Applause.)

Mr. CARTER seconded the motion, remarking that the greatest portion of tin this quarter had come from the bottom of the mine, where they had driven through a payable lode, which would lengthen. For years they had allowed about 50 tons of tin to go down the river, but they had now erected appliances, and by these means were saving about 15 tons a quarter, and also reducing their dressing cost £40 a month.

The motion was carried.

The CHAIRMAN reported that 40 shares had been relinquished by Miss Cotton, of London, and 60 shares by Mr. McKeand, the late Chairman of the company. It was regrettable that their shareholders were not able to go on with them, but there was a limit to all powers of endurance.

On the proposition of Mr. OLDS the relinquishments were accepted, and carried to the relinquished share account.

The meeting was then made special, and 73 shares (on which more than one call was due) were declared forfeited, subject to the usual conditions.

Mr. D. W. BAIN proposed a vote of thanks to the Chairman, which was seconded by Mr. WOOLCOCK, and carried.

The CHAIRMAN, in reply, said that he was determined to stick to Wheal Basset as long as their present manager was there, and was prepared to carry on his interest. Captain James had his thorough confidence, and he was sure that if some other managers had the mine it would be stopped before now. In proposing a vote of thanks to the purser and manager, he said he had been rather surprised at a man of light and leading in the tin market, such as Mr. Strauss, should have thought the immediate future of tin likely to be affected by any supplies of tin which could come from South Africa. He (Captain Oats) happened to be interested in a company there—pretty considerably interested—which had raised all the tin which had so far come from there, and they had a concession of about 150 square miles. There was certainly some alluvial tin there, but no tin had been found in the rock, and 20 or 30 tons of tin had been sent to this country, and there was 50 or 60 tons more on the water. It was possible that 20 tons a month might be returned, and in course of time 100 tons a month, but that was so far as he could see the limit of possibility. There were some adjoining properties, but not nearly so considerable. He thought they would agree with him that no tin was coming from Africa in the immediate future to affect the price in any way, and Mr. Strauss's ignorance in that tended to discount any reference he might have made to other places, and gave him the impression that it was a case of any stick being good enough to beat a dog with—that anything was good enough to discredit the article tin. He did hope the price would go in a contrary direction to that indicated by the prophets.

Captain WILLIAM JAMES, in response to a vote of thanks proposed by the CHAIRMAN, and seconded by Mr. LIDGEY, said he did not wish to be too sanguine, but he hoped for good discoveries. He did his best to get fair work out of the men, and in 2½ years had driven in one level (the 230) 400 fathoms of tunnels. The mine was very difficult to work. The caples are peculiar to follow, being egg shaped, and varying from 50 fathoms in width to 4 feet. Sometimes the tin was in the middle, and sometimes on one side. He did not anticipate a big loss during the next quarter. Since he had been there he had put in all new boilers or made the old ones efficient. He expected merchants' bills would hardly be so much next time. Labour cost might be a little more if the committee decided to drive more ends. He wanted to prove the mine productive or else to finish it.

Mr. R. Rendle (the Purser) and the committee received the thanks of the meeting for their constant attention to the welfare of the mine and its proprietors.

THE QUEBRADA RAILWAY, LAND, AND COPPER COMPANY.

Liquidation unanimously approved.—The prior charges of the company.

An extraordinary general meeting of the above-named company was held at Winchester House, Old Broad-street, on Wednesday, for the purpose of considering, and, if thought fit, passing a resolution voluntarily winding up the company.

Mr. N. G. BURCH (the managing director) read the notice convening the meeting.

The CHAIRMAN said—Gentlemen, you have been made acquainted by circular with the severe misfortune which befel the company on July 28 last, by the collapse of the Aroa Mine, a misfortune which has led to the necessity of the board calling you together to-day for the purpose explained in the formal notice of the meeting. The advices which the board have received indicate that this collapse was of the gravest character, and had the effect of crushing in the main incline shaft from the collar down to the 27 fathom level. From this point, therefore, downwards the mine is at present inaccessible. The pumping machinery was entirely disabled by the accident, and so the mine became filled with water through normal percolation, which under the circumstances the management was powerless to prevent. I should explain that Holman's disused level is still open, and is being cleared out, as it is not impossible that it may be decided to reopen the mine by sinking a shaft from the inner end of that level, which is just over the ore body. It was extremely unfortunate that this disaster occurred before the arrival in Venezuela of the metallurgist and engineer, Mr. Alexander Hill, whose engagement was referred to at the general meeting, so that this gentleman has had no opportunity of examining the lower part of the main mine, although he has had access to the Titiara Mine, and also to a portion of the Aroa lode, where the carbonate section remains accessible. Our advices indicate that the effect of this diaster, so far as output is concerned, is that for a certain limited period we cannot reckon upon more than about 2500 tons of ore per month, viz, 1000 to 1500 tons of sulphides instead of 4000 tons, and from 1000 to 1500 tons of carbonate, should they be required. The percentage of these ores would not, however, be sufficiently high, nor would the quantity be large enough to treat them profitably in the blast furnaces at the present low price of copper. Mr. Hill had, therefore, decided, as a temporary measure, to close down the smelting works so soon as the stocks of calcined ore were used up, and [this took effect at the end of September. The ore extracted would meantime be allowed to accumulate. Mr. Hill has also been devoting his attention to a large reduction of expenses by getting quit of all unnecessary hands, so that the expenditure at the mines and smelting works is now very much reduced. Mr. Hill having installed the manager on the spot, is returning to confer with the board, and submit his scheme for the future working of the mine. He may be expected here in a few days. We informed you at the last general meeting that we were in consultation with some of the largest debenture holders, with a view to devising some scheme for carrying the company through its financial difficulties; but this disaster at the mines, which involved the necessity of providing new capital outlay, made it quite clear to the board and those with whom they were in consultation that the only real relief to the financial deadlock lay in a comprehensive scheme of reconstruction. It was, therefore, decided, in order to avoid placing the company further in debt, to suspend the payment of interest on the company's debenture stock and prior lien bonds, due on September 1, and a committee, representative of all interests, was immediately formed by the board to consider what alternative could be devised to escape the forced liquidation with which the company was confronted. We may state that this committee was specially selected in order fairly to represent all the interests concerned. It was composed of —Mr. Burch, representing your directors; Mr. Crisp, representing very large holders of debenture stock and prior lien bonds; Mr. Douglas, representing the committee nominated by the shareholders at the general meeting; Mr. Wenham, representing the company's largest trade creditors. The report and recommendations of these gentlemen have been in your hands for some days, and no doubt have had careful consideration. Differences of view are inevitable where there are divergent interests; but I believe it will be found that the more the scheme comes to be studied the more clearly it will be seen that the various interests have been impartially dealt with. The board has been sorry to learn from our legal adviser that in the event of liquidation of the company the preference shareholders can stand in no better position than the ordinary shareholders, which will necessitate some modification of the committee's scheme, so far as the preference shareholders are concerned. In other respects we approve of the scheme. Mr. Carter's committee, appointed at the last general meeting, has devoted much time and attention to the company's affairs, and has been afforded every facility and access to documents, correspondence, &c. They have reported to you quite independently of the board, and I can only regret that their assistance should have been so entirely overshadowed by the later events at the mines. I beg to move:—"That the company be wound up voluntarily, under the provisions of the Companies' Acts, 1862 to 1890." The resolution will be seconded by my friend. I may say that the board have been advised by their solicitors that the proper course is, first, to submit the resolution now before you. If it be passed at this meeting it will be submitted for confirmation at a second meeting to be held on a day to be fixed, within one month from this date. On that day a further resolution will be submitted embodying a complete scheme of reconstruction, drawn, as far as may be found practicable, in accordance with the recommendations of the committee as set out in their report dated October 3. It will be clearly understood that only shareholders can vote on the resolution, and not bondholders, unless they are also shareholders.

Mr. J. M. DOUGLAS seconded the motion.

The CHAIRMAN explained that, according to the advice of the company's solicitor, the proper course would be first to submit the resolution to that meeting, and if it were carried to submit it for confirmation at a second meeting, when at the same time a further resolution would be placed before the shareholders embodying the scheme of reconstruction as formulated by the committee in their last report.

Mr. CARTER said that he had always had two objections to the proposed scheme of reconstruction, which at various times he had stated. The first was the cruel position in which the preference shareholders were placed; and the second was what he thought to be the over-capitalisation of the company. He hoped that in the former case some change would be effected, and that in the latter some sacrifices would be made by the different classes of shareholders, in order to reduce the capital. The company could hardly be injuriously affected by the projected separation of the railway from the mines. The railway was an excellent and improving property, and should not, he thought, be overweighted with capital. No doubt the railway would require to have some money spent upon it, which would entail an additional increase of the capital. From several long talks he had had with gentlemen who had been out in Venezuela he could not help thinking the mine had a good future before it under economical and skilful management. Even with the present price of copper it was not at all improbable that the concern might go back to its former period of prosperity.

Mr. BLUNDELL complained that the reconstruction scheme unduly favoured the bondholders at the expense of the shareholders. The prior lien bonds had been almost entirely put on the railway company, on the principle, probably, that the railway was the better horse of the two and could bear the burden. Some alteration ought to be effected in the proportion of shares given to the railway and the mine. He hoped that the confirmatory meeting would be delayed until the arrival of the gentlemen from the mines.

Mr. CUFF asked the Chairman to take into account the protests made with regard to the details of the scheme.

Mr. MULLINS criticised the scheme in strong terms, deprecating the manner in which the debts of the company had been piled up.

Mr. DOUGLAS reminded the meeting that the scheme of reconstruction had not been drawn up without a great deal of consideration, during which every figure had been closely scrutinised and every point canvassed. He was very hopeful that the results would be satisfactory to all classes of shareholders. Practically none of the profits of the railway were drawn from the mine, as the mine traffic was undertaken at cost. It was, however, quite obvious that two sets of managers were required for the railway and the mine. Mining men knew nothing about the railway, and the railway men knew nothing about the mine. The prior lien bonds had to be left on the railway because that was the only part of the property that would give sufficient security. They would have been glad to have done all this without adding to the capital, but that was, of course, impossible. After consulting with many people he had come to the conclusion that the scheme formulated could not be improved upon. At the same time he had no fondness for it, and if it could be improved he should be very glad. As to the preference shareholders, the law said they had no right to better treatment than the ordinary shareholders, but as this seemed harsh they had thought it right to make some small concession in their favour.

Mr. PHILPOT asked why the prior lien bondholders and Messrs. Matheson should be put on the same level.

Mr. DOUGLAS replied that it would be better for the company if the encumbrances were consolidated, while at the same time the market value of both would be higher.

The CHAIRMAN explained that he personally had had no hand in formulating the scheme, and before it was adopted meetings of the different classes of bondholders would have to be held, and their consent obtained.

Mr. MEATES spoke in terms of strong disapproval of the whole scheme, and hoped that some modification of it would be effected. He doubted very much whether with all the prior charges on the property the shareholders could expect to get anything.

Mr. BAKER thought the scheme pressed very heavily upon the preference shareholders.

The SOLICITOR pointed out that the scheme could not pass into effect unless a majority of three-fourths of the different classes of bondholders approved of it.

The CHAIRMAN then put the motion for the liquidation, and declared it carried unanimously.

DON PEDRO GOLD MINING COMPANY, LIMITED.

Reconstruction successfully completed.—The management at the mines.

The statutory meeting of the shareholders of the Don Pedro Gold Mining Company (Limited) was held on Wednesday, at the offices, Devonshire Chambers, the chair being occupied by Mr. H. TOLPUTT.

The SECRETARY (Mr. R. N. Dawson) read the notice convening the meeting.

The CHAIRMAN regretted the absence of Sir Frederick Dixon Hartland, who was still enjoying a holiday after his arduous labours in Parliament. The meeting was merely a formal one, and in the course of a few weeks another would be held, when Mr. Touzeau, the company's representative, would arrive back from the mines. According to the latest information everything was going on satisfactorily at the property. The board had had a good deal of work and trouble, but now everything was going on smoothly and steadily. Some delay had been occasioned in the repairing of the works, and when Captain Jeffry got out on the property he found the upper shaft in a very bad way, and they had to set to work at once to make it perfectly safe before attempting to do anything below. They had now some £950 worth of gold on the way here, most of which had been taken from the old tailings lying about the wash house. They had sent out a good reduction officer, whose character and attainments were satisfactory in every way, and he had at once set to work cleaning up and had taken samples of the tailings three times a day. When they had got a little farther forward in their operations they proposed to send out a man of special qualifications and Australian experience to overhaul the reduction department. There was some occasion to fear that robberies had occurred there in the past, but every precaution had been taken to prevent their recurrence in the future. In conclusion, the Chairman referred to the death of Mr. Dawson, expressing his great regret at the occurrence.

Mr. BEVITT spoke in terms of strong disapproval of the past management of the company, and intimated his intention of again alluding to the matter at a future meeting.

The CHAIRMAN mentioned that the total number of shares taken up had been 124,368 out of 125,000, which he thought to be a very satisfactory record, and one upon which they might heartily congratulate themselves.

A vote of thanks to the Chairman terminated the proceedings.

TATE TIN MINES.—A gentleman who recently returned from a visit to the Tate Tin Mines, tells the *Wild River Times*, Herberton, Queensland, he was surprised to see the extent of ground being worked. He says he visited a number of claims, at all of which the owners were busily engaged in either sluicing or stacking stanniferous washdirt, some of them getting their water to sluice with by means of a long sapling fixed in a fork, the spring of the sapling, with the help of a man, capsizing the bucket into the sluice box. With these primitive appliances the work was necessarily slow and laborious, but still he said he was assured by some of the men so engaged that they could make a decent living even by that style of working. Any person visiting the township in the daytime would feel that he had entered a deserted village, but one can ride for miles over the country before losing evidence of the industry that supports the township, every now and then the camps of the "hatter" and parties of two men and more striking the vision, and the scene of their workings looming in the distance, the stacking of wash dirt ready for the next wet season apparently being their principal occupation just now. Our contemporary informant says he went along the race of the company, for which Mr. G. R. Bell is the manager, for some miles, and could not but admire the workmanship and substantial appearance of that portion of the race at present completed. The race has now been cut and constructed to the river bank, the walls in some places, neatly built up with rough stone, giving one the idea of defensive fortifications on a small scale. The rock through which the race is got to be cut to finish it is very hard granite, which blunts the drills in no time when boring, but this notwithstanding, Mr. Bell confidently hopes to have it completed in about six weeks' hence, when he will start cutting the tail race.

SOUTH-EAST MYSORE GOLD COMPANY, LIMITED.

Reconstruction unanimously approved.—Large extent of payable quartz.

An extraordinary general meeting of the shareholders of the South-East Mysore Gold Company (Limited) was held on Thursday, at the Cannon-street Hotel, the chair being occupied by Major-General G. De la Poer Beresford, for the purpose of considering, and, if thought fit, passing resolutions winding up the company.

The Secretary (Mr. John Garland) read the notice convening the meeting.

The Chairman said: Gentlemen, you have heard the notice read, and you have doubtless received our circular of the 12th inst.; you will know, therefore, the position of the company and the views of the directors in regard to the further development of the new property. We had the pleasure of meeting you here so recently as July 4, when the then position of affairs was very fully discussed. We gave you all the information we had in regard to the new property the company had provisionally acquired—viz., the Yerrakonda Block—and we informed you of the mining work which had been accomplished on that property, and the prospects as they then appeared. I am very pleased to be able to inform you that the favourable appearance of the mine, of which I then spoke, has continued, and we have every reason to believe that the Yerrakonda Block will turn out to be an exceedingly valuable one. The lode at Beresford's shaft and workings is large and productive, and at Pigott's shaft we are yet hopeful that a discovery of importance will be made. We are convinced that the extensive old workings in the neighbourhood of that shaft indicate that something good will be found beneath them; but I will not tire you with any remarks of mine in reference to the mine, as Mr. Taylor is here, and will doubtless speak upon that subject. As to the reconstruction. The question of providing additional funds for the development of our property was discussed at our last annual general meeting, so that no shareholder could have been surprised at receiving the papers containing the board's proposals in this matter. The directors, before deciding upon any scheme, very carefully considered and fully discussed the best means of obtaining the required capital, and they came to the unanimous conclusion that a reconstruction was the best, if not the only, practical method of raising the required sum. Under the scheme you will observe that every shareholder will be placed in the new company in a similar position to that which he now occupies in the existing one; that is to say, he will receive a share for every share he now holds, and his total liability will be only 2s. per share. Of this 6d. per share will be payable on allotment, and you will be called upon to pay nothing further for at least four months from that date. This is equivalent to the continuance of our present company with a call of 6d. per share. You will remember that when we acquired the option to purchase this Yerrakonda Block the condition was imposed that we had to spend a certain sum of money in prospecting there. This was done, and the results were satisfactory; but it was never pretended, and, of course, no shareholder ever believed, that the small amount of money at our disposal was sufficient to bring the new mine into a dividend paying state. The amount at our disposal was between £3000 and £4000. It has, however, been sufficient to prove that we have a property with excellent prospects, and one which, I presume, no shareholder would wish abandoned. We have, I think, ample evidence of the views of the shareholders, for holders of upwards of 100,000 shares, or half the capital, have sent us their proxies, which, of course, notifies the approval of the scheme. We have had no single letter from anyone condemning the scheme. The mill was started on the 6th of this month, so that we shall probably be getting returns of gold almost immediately. We cannot say what the results will be, for we have not yet had the result of any trial of the quartz. First crushings, as you know, do not as a rule yield a high percentage of gold, but this, no doubt, will be improved upon as we go on, and we think that before long the position of the mine will be such as to yield us quartz in abundance. The Chairman concluded by moving the following resolutions:—

(1) That it is desirable to reconstruct the company on the lines of the scheme submitted to this meeting, with or without modification as may seem expedient, and accordingly that the company be wound up voluntarily, and that Mr. John Garland, of No. 6, Queen-street place, London, E.C., be and he is hereby appointed liquidator for the purposes of such winding up.

(2) That the draft agreement submitted to this meeting and expressed to be made between this company and its liquidator of the one part, and the Yerrakonda Gold Mining Company (Limited) of the other part, be and the same is hereby approved, and that the said liquidator be and he is hereby authorised, pursuant to Section 161 of the Companies' Act, 1862, to enter into an agreement in the terms of the said draft with such company (when incorporated), and to carry the same into effect with such (if any) modifications as he thinks expedient.

Colonel E. Pemberton Pigott seconded the resolutions.

Mr. John Taylor said that the Chairman had drawn the attention of the meeting to the fact that it was little over three months ago since the annual general meeting was held, at which he (the speaker) had given a full description of the works at the mines. Shareholders would, of course, be aware that after the elapse of so short a time there could be no great extent of new development to speak of. At the same time he might state that the underground operations had been carried on by Captain Scantlebury as rapidly as possible with the means at his command, and on the whole with satisfactory results—results which, so far as he could judge, fully confirmed the opinion held by the board at the time of the last meeting, that they had got a valuable property, that the reef undoubtedly contained gold in payable quantities, that the mine was likely to turn out a good one, and that they were most assuredly warranted in expending the capital necessary to develope it. Now, it was quite true they had so far been disappointed in not meeting with the reef in Pigott's shaft, but they must hope that the course recently adopted by Captain Scantlebury—the course of sinking a shaft about 120 feet from Pigott's shaft down through the old workings—would before long lead them to the reef. In Beresford's shaft, on the contrary, they had been successful in opening out a very considerable extent of gold-bearing reef. It would be remembered that at the time of the general meeting in July last this shaft had been sunk to a depth of a little over 200 feet. For 100 feet it was sunk vertically from the surface, and then had been sunk 106 feet further on the reef, the average width of which for that distance was 4 feet 7 inches, and of an average value of 13 dwts., and much richer at some points. At that time levels had been started north and south from nearly the bottom of the shaft, and in both of these the reef was looking well. Beresford's shaft had now been sunk a further distance of 50 feet, the reef ranging from 2½ feet to 4 feet in width, and giving quartz varying in value from 3 dwts. to upwards of 3 ounces, but, as had already been said, gold bearing throughout. The 200 feet level had been driven south 83 feet, in a reef which had been from 1½ to 4 feet wide, and assaying from 2 dwts. upwards to 5 ounces. The level north had been driven 165 feet, and the reef there had been from 1½ to 4 feet in width, and assaying from 2 dwts. to close on 2 ounces. In addition to this, rises were being put up above this level, both of which were proving the reef to be similar in size and value. It was clear then that they had a great quantity of productive quartz laid open ready for the mill, which had, as they were all aware, now been put to work. So far no information had come to hand as to the results of the milling, but they might shortly be expected. With a view to the efficient working of this run of quartz they had now proved over a length of 250 feet. A new shaft had been commenced 400 feet north of Beresford's shaft which would be sunk as rapidly as possible to get to the 200 feet level driven north from Beresford's. This new shaft, at the date of the last report, October 3, was down to a depth of 34 feet. There appeared to him to be absolutely no question as to the wisdom of vigorously following up the working of the mines, which, when they took into consideration the short time they had the limited amount of capital at their disposal, undoubtedly presented very favourabe prospects. In consideration of the question now submitted to the meeting, they must bear in mind that in the whole development of the reef since it had been acquired by the company, in the whole of the workings he had been describing, absolutely no unproductive ground had been met with, while the reef had been strong and regular and persistently gold bearing throughout, and in places very rich. (Applause.)

Mr. Martin Wood enquired whether the shareholders could not be put into possession of some accounts giving details of the expenditure incurred since the last report, which carried them up to March 31st last. Reconstruction so soon after the last call was paid would come as a serious matter for the shareholders. There appeared to him to be little evidence in justification of the very favourable account which Mr. Taylor had given of the property at the last meeting. The mistake appeared to him to be that the management instead of going deep into the ground had devoted too much of its energy and capital to prospecting.

The Chairman said that when the company left it. former ground the shareholders were told that the board intended to prospect the new block. They had a certain amount of money to meet the charges of the works, and they carried them out with the result that they now told the shareholders that the conclusions they had arrived at were such as to justify deepening, which they were now going to carry out. The money in the hands of the board could hardly have been made to go farther. The directors' fees were only £200 a year, while the managers were content to take half pay.

Mr. John Taylor, in reply to Mr. Wood's criticisms, said Captain Scantlebury had been sinking as far as he could, and a great deal of work had been done considering how they were hampered by want of time and money. It was totally erroneous to suppose that on the Kolar field they could not discover any rich ground until they got below the 200 feet level. There were shareholders in the room connected with the Ooregum, Mysore, and Champion Reef companies who knew that vast quantities of gold had been taken out of these companies' mines at less than 200 feet deep.

Mr Hancock deplored the necessity for reconstruction within so comparatively short a time of the last, and recurred to his proposal for the appointment of two additional directors to act with the present board. He thought, moreover, that the management had been unwise in sinking at the two ends of the property instead of concentrating its energy and resources in one.

The Chairman said that Captain Scantlebury had been largely guided by the old workings which existed on the field in large numbers.

Sir Charles Lawson expressed concurrence in the proposal to add to the board.

Mr. Jepps urged that the meeting should come back to the purpose for which it was summoned. The board had spent very economically the small amount of money at their command.

The resolutions were then put and carried unanimously.

The Chairman assured the meeting that every share not taken up by the shareholders would be placed elsewhere.

SOUTH SIMMER AND JACK DEEP LEVEL GOLD MINING COMPANY, LIMITED.

Amalgamation with Simmer and Jack.

The ordinary general meeting of the company was held at Winchester House, on Thursday, Mr. F. A. Thompson presiding.

The Secretary (Mr. Beauchamp O. C. Orlebar) having read the notice convening the meeting,

The Chairman said: Gentlemen, in moving the adoption of the report and balance-sheet, which is made up to June 30 of the present year, and in view of what has recently occurred in connection with your property, there is but little left for me to say. As you are aware, a contract was entered into some time ago between this company and the Gold Fields Company for the purpose of amalgamating this property with the Simmer and Jack. Since the last confirmatory meeting that agreement has been carried into effect, and immediately after the adjournment of this meeting a special general meeting will be held for the purpose of passing a resolution, a copy of which is printed upon the back of the notice. If there are any questions that any shareholder would like to ask regarding the accounts as submitted, I shall be glad to answer them to the best of my ability; otherwise I will move the adoption of the balance-sheet and report as submitted.

Mr. E. R. Thompson seconded the motion.

The Chairman, in reply to Shareholders, said the South Simmer and Jack Company would get 33,000 shares, fully paid, in the Simmer and Jack Company. The capital of the Simmer and Jack Company had been increased to £250,000, and it was out of that increased capital that the 33,000 shares would come. He considered the valuation of the Simmer and Jack shares at the present time, which this company would receive, would be £7. That would make the South Simmer and Jack shares worth about £2, and it gave, as was stated at the last meeting, the right to the shareholders of this company to apply for a certain number of the 45,000 Simmer and Jack shares, which were sold for the purpose of working capital. They had a right to take those at £6, which, at the present price, gave a profit of £1 on every share they were entitled to receive in that way. The Gold Fields Company had not yet notified them of the limit in which to take the shares up; but as soon as it is done the shareholders would receive notice of the amount to be applied for, and the time within which applications could be made.

The report and accounts were adopted.

Mr. Henderson said that the Chairman had been practically the company's engineer on this side, and had undertaken a very great amount of work. The remuneration which would have come to him in the future working of the company was a thing of the past, now that the amalgamation had taken place; and having regard to his services he would propose "That a bonus of 200 guineas be awarded to him."

Mr. Keith (a shareholder) seconded the motion, which was carried unanimously.

The Chairman said he took this property up five years ago in Johannesburg, and in connection with it first met Mr. Henderson, who had since been associated with him in the matter. It was a source of great gratitude to him to know not only that his services were appreciated, and that he had been able to render them to the company, which would continue to be a success, but to know that the taking of the property by him as an engineer at that time had been confirmed by the best engineers in the world, bar none—those of the Consolidated Gold Fields Company in South Africa at the present time. It was a little disheartening to have to attend a funeral of this kind when the company was on the verge of success, but it was one of the things which occurred in life, and it would have to be taken with as much grace as possible. He was sure that every shareholder in this company, who continued with the Simmer and Jack as at present consolidated, would never have any cause for regretting it.

This concluded the ordinary general meeting.

A special general meeting was held. The Chairman (Mr. F. A. Thompson) proposed the following resolution:—"That the company be wound up voluntarily, and that Beauchamp Orlando Chichele Orlebar be appointed liquidator of the company at a remuneration of 50 guineas, exclusive of expenses.

In reply to a Shareholder, the Chairman said the directors would ask the Consolidated Gold Fields for information upon the point, and would send to each one of the shareholders of this company the exact number of shares to which they were entitled, and the date within which application must be made.

The motion was seconded by Mr. E. R. Thompson, and carried.

The Chairman then proposed a resolution conferring authority upon the liquidator for the purpose of dividing the shares in the Simmer and Jack Gold Mining Company (Limited) to be received by him under the terms of the contract, made between the company of the one part, and the Simmer and Jack Gold Mining Company (Limited) of the other part, as purchase money of the property of the company, amongst the members of the company in specie, which was duly seconded and carried. The Chairman, in reply to questions, said he presumed that fractions of shares would be distributed in cash. The new shares would probably be ready within a month, but due notice would be given the shareholders.

The Solicitor explained that the meaning of dividing the shares "in specie" was that the liquidator would divide the shares among the shareholders without first realising them.

The Chairman announced that the confirmatory meeting would be held on November 12, and that everything would be done to get matters into shape at the earliest possible moment.

SCOTTISH AUSTRALIAN MINING COMPANY.

The company's trade extending in foreign markets.—Hopes of a trade revival.

The half-yearly general meeting of the shareholders in the Scottish Australian Mining Company (Limited) was held yesterday, at Winchester House, the chair being occupied by Mr. George Smith.

The Secretary (Mr. F. W. Turner) read the notice convening the meeting.

The Chairman said: Gentlemen, the circumstances of the Australian coal trade, as we find them to-day, continue to present features of a chequered character. On the one hand, the volume of trade of the half-year, dealt with in the report, shows a satisfactory increase on that of its predecessor; on the other, we have to deal with lessened prices. You are aware that 1893 was characterised in Australia by financial disasters, unprecedented, I believe, in their volume and ramifications. The great banking failures began in May of that year, and I think I may say that the half year which ended with December last felt the full weight and intensity of the crisis. The coal trade being one that enters into every department of commercial and private life, naturally responded to this state of things, and thus while the sales of coal from all the Newcastle collieries amounted during the first half of 1893 to 930,615 tons, they fell in the second half to 742,102 tons. It may be said that the acuteness of the crisis has passed over, but we now find ourselves confronted with a condition of obstinate depression, which keeps trade and business of all kinds in a very inactive state, and causes it to be of a most unremunerative character. We see, I am happy to say, during the first half of 1894, some improvement in the first of these conditions—that is to say, we have an encouraging increase in the volume of the Newcastle coal trade during that period, as compared with the second half of 1893, the figures being respectively 933,604 tons, as against 742,102 tons. Thus it seems we have begun the ameliorating process so far as quantity is concerned, and have left the lowest point reached during the financial crisis behind us. But when we come to consider the subject of profit producing, I confess that I do not yet see any beginning of better things. During the second half of 1893, the agreement between the Newcastle collieries was still in existence, and the price nominally 10s. and 9s. a ton. With the beginning of this year all the collieries were free, and the price fell to nominally 8s., but practically to something lower. Of course it is well known that, as a general rule, a large trade with a low selling price is more enduring and, in the end, more profitable than a smaller trade at a higher price, bolstered up by artificial conditions, and I think that this will prove ultimately to be true of the Newcastle coal trade. Already we see that this freedom of action, combined with low prices, has had an influence in the expansion of the foreign-going trade of Newcastle, which rose from 213,407 tons in the second half of 1893, to 369,593 tons in the first half year of 1894. Australian coal has numerous competitors in foreign markets, and it is only by the combination of good quality and low price that we can expect it to compete there successfully. It is true that we have in the colonies themselves an outlet for a considerable quantity of coal, but this is not sufficient at present to take up all the production, and I consider it, therefore, a hopeful sign when I see the foreign trade reviving. Another factor in the problem of how to get profit presents itself in the question of cost of production, and here we have a most difficult element to contend with, for while the working man in times of prosperity will accept the willingly accorded rise in wages with the greatest alacrity, he will not with equal readiness submit himself to the inevitable reduction when times are bad. At the beginning of this year a slight reduction in the hewing rate was obtained, but this is not sufficient to enable colliery owners to make both ends meet, including a moderate profit for themselves. The subject is beginning to be agitated in the colony, and here and there further small reductions have been obtained, but your able manager, Mr. Croudace, is of opinion that the process must go further and become more general if the coal trade is to expand and return to moderate prosperity. New South Wales coal, the quality of which is not surpassed by any of its competitors in foreign markets (if we except the best qualities of Welsh coal) will always command a trade if the price is low. If then the miners could be brought to see how largely their permanent interests would be promoted by a reduction in the scale of wages, and consequently more constant employment, a very great step in the direction of prosperity for both masters and men would be taken. You may be sure that this matter occupies the anxious attention of the board and manager. Turning from this general view of matters, to our own particular affairs "Lambton" shows a very satisfactory increase of sales in the first half of 1894 as compared with the second half of 1893. "Burwood," we may say, is only just beginning, and you must not take the quantity sold in the first three months of this company's working of it as a criterion of what its capacities will be when Mr. Croudace has got it thoroughly under his control. He continues very pleased with the purchase, and I think that whenever anything like reasonably good times come round again, his satisfaction will be shown to have a solid foundation. We cannot expect to buy a colliery at dead low water without having to put up for a time with the disadvantages which have been the very means of throwing it into our hands. If Mr. Croudace is right (and no one knows the coal trade better than he), "Burwood" will ere long more than justify the expectations upon which that opinion was founded and the price given for the property. "Durham" is now very nearly in the position of becoming an active coal producer. Of course we have not been pushing its completion unduly forward while times have been so bad, but it now stands almost complete. The subject of finance has, of course, occupied a good deal of our attention in connection with the "Burwood" purchase and "Durham" outlay, and I think it may be necessary ere long to call up a little more money on the new shares in order to recoup funds temporarily used from other sources for the completion of these important matters. I should have been glad, gentlemen, if the amount of the half-year's profits had been sufficient without assistance to pay you the very moderate dividend proposed at the rate of 4 per cent. per annum. As, however, that may not be, I think we may very reasonably go back upon the savings of previous prosperous half years to the extent of £1500, and this we propose to do. Gentlemen, our "Black Diamonds" have been valuable to us in the past, and if for the moment they are depreciated by the passing universal stagnation of trade, they must recover their value when increasing demand and developing trade shall restore new life and enterprise to the commercial world. Meanwhile, by strict economy, and by pushing our trade, we shall do our best to hasten returning prosperity. I now beg to move:—"That the report of the directors be received and adopted, and that the dividend proposed therein at the rate of 4 per cent. per annum upon the called up capital of the company, £225,000, be confirmed, the same to be payable free of income tax, on and after the 3rd of November next."

Mr. F. B. Ward seconded the resolution.

Mr. Fergusson said the Chairman's speech had been so full that there was very little left for him to remark upon. Although the report now presented was not so rosy as many of its predecessors, there was not the least doubt that the directors and local officers of

the company had done their best, while their trouble and anxiety must necessarily have been vastly increased owing to the bad times. Commercial depression, however, could not last for ever, and if they were to wait patiently, there was no doubt that their business, being a perfectly sound and healthy concern, would come round in time, when the days of good dividends and additions to the reserve fund would recommence. In the meantime he hoped the workmen in Australia would see that their ultimate and permanent interests would best be served by accepting for the moment a slight reduction in the payments made to them.

A SHAREHOLDER expressed some small disappointment that the profit upon the coal was only 8d. a ton.

The CHAIRMAN said he would be delighted to see it higher.

Mr. VARLEY did not regard 8d. as at all a bad margin of profit. His own interest in coal properties had been highly remunerative, and he believed that there would soon be a better state of markets.

Mr. SMALL enquired whether current sales were being maintained.

The CHAIRMAN replied in the affirmative.

A resolution was then submitted from the chair, seconded, and carried unanimously, voting to Mr. J. R. Frewer the sum of 20 guineas for his services during the past half-year as auditor.

Mr. JOSLIN moved a hearty vote of thanks to the directors, secretary, and staff, and the local management. No doubt the shareholders on both sides of the table would not like the present condition of things, but they could not help themselves—(hear, hear)—and he sympathised both with the directors, who had to tell of diminishing receipts and lower dividends, and also with the shareholders, who had to receive them. No doubt if they were to call to their aid the useful grace of patience they would get back in time to satisfactory dividends, and so long as the company was in the hands of people who kept a bright look out, and a strong hand on the helm, they would have the consciousness that they were doing all they could in the interest of the company.

Mr. VARLEY seconded the resolution, saying the success of a company was entirely a question of management.

Mr. FERGUSSON heartily supported the resolution, speaking in high terms of the courtesy with which shareholders were invariably received at the offices.

The CHAIRMAN and SECRETARY having briefly returned thanks, the proceedings terminated.

CENTRAL AFRICAN COMPANY (LIMITED).—An extraordinary general meeting of this company was held on Wednesday, at 73, Basinghall-street, E.C. Mr. F. A. Gillam presided, and said that in April, 1892, the company sold its assets to the Central African and Zoutpansberg Company. Subsequently there was a meeting, at which one of the shareholders brought forward a proposition to wind up the company, but a majority decided it would be better to carry it on. The Central African and Zoutpansberg Company had now amalgamated with the Oceana Company, and the directors thought the time had arrived when they might with advantage wind up this company. They originally received 160,000 shares from the Central African and Zoutpansberg Company for the undertaking; but the large number of these had still to be sold to pay the debts of the company. After the debts had been disposed of, the distribution would work out at at least three Central African and Zoutpansberg shares to one Central African, or two Oceana shares to five Central African shares. Probably, also, there would be some surplus assets to be distributed; but that would be a matter for the liquidators.—The Chairman then moved, and Mr. McAllister seconded, "That the company be wound up voluntarily, and that Finlay Alexander Macrae and Thomas Fell Dalglish be, and they are hereby, appointed liquidators for the purposes of such winding-up."—The motion was carried.

PORT PHILLIP GOLD COMPANY (LIMITED).—An extraordinary general meeting of the Port Phillip Gold Company (Limited) was held at the offices of the company, 57, Moorgate-street, on Wednesday, when the subjoined resolution which was passed at an extraordinary general meeting of the above company, held on Wednesday, October 3, was confirmed.—"That the capital of the company be increased to £175,000 by the creation of 300,000 new ordinary shares of 5s. each, and 200,000 preference shares of 5s., such preference shares entitling the holders to a fixed cumulative preferential dividend at the rate of 10 per cent. per annum on the amount for the time being paid up on such shares, and in addition, to participate *pari passu* with the holders of ordinary shares in the surplus profits of each year, such preference shares to rank both as regards capital and dividend in priority to the other shares of the company."—The Chairman (Mr. T. Cornish, M.E.), in moving the resolution, said that everything looked favourable for a successful issue of the preference shares. He was now in treaty with a large syndicate in the City of London for the purpose of underwriting such portion of the issue as the old shareholders did not care to take up. As soon as the whole of the shares were placed they would telegraph out to their manager, instructing him to commence operations at once, and in a very short space of time he expected they would have several hundred men below raising ore. He had every confidence in the manager and in the future success of the concern. He reminded them that out of a comparatively small area of their present property they had in the past obtained gold to the value of about £5,000,000 sterling, of which £1,500,000 had been paid in royalties and dividends. He believed they had one of the grandest properties in the Australian colonies, and, indeed, in the world.—Mr. Branscombe seconded the motion, which was carried unanimously.—A vote of thanks to the Chairman ended the meeting.

DE BEERS CONSOLIDATED MINES (LIMITED).—Mr. Rhodes, presiding at the annual meeting of the De Beers Consolidated Mines (Limited), at Kimberley, on October 22, said that diamonds had been produced during the past year to the value of £2,820,000. After deducting the expenditure, a sum of barely a million and a quarter was left for distribution; but a good portion of this expenditure would go to strengthen the position of the company against all possible contingencies. The fall in diamonds represented a loss of half a million, but the dividends were maintained. The advances made to the Chartered Company had proved profitable, besides being a public act. They might look for a more prosperous diamond market, although he did not expect a return to the old rates. Referring to the American diamond duty, Mr. Rhodes said he was for Free Trade, but also for reciprocity; and if they were to shut Brother Jonathan's new products out, they would perhaps bring him to his senses. They would not ask the shareholders to vote £10,000 again to exhibit their diamonds in America. The moral of it all was that they should leave America alone.—*Times.*

MALLINA GOLD MINE (LIMITED).—An extraordinary general meeting of the Mallina Gold Mine (Limited) was held within the registered offices of the company, 49, West George-street, Glasgow, on Wednesday last.—Mr. H. M. Cadill, who occupied the chair, said that the board were pleased to report that since last meeting the balance of the 15,000 shares offered to the public at the formation of the company had all been subscribed and allotted. He also pointed out that the attention of the directors had been called to a proof prospectus of a company entitled West Mallina, and they wished to tell the shareholders that that company had no connection with the Mallina Gold Mine (Limited). Further, the manager had recently pegged off and secured three additional claims adjoining the company's original property, to the west and south, so that the ground now covered 61 acres, as against 25 acres when the company was established. In the last letter from the mine, dated 31st August, and received on Tuesday, the manager said that the ore now worked amounted to 1258 tons, and that the prospects of the mine still promised a brilliant future.

PHILIPPINES MINERAL SYNDICATE.—A 10 stamp mill, which can be increased to 20 stamps without interference, has been ordered from Messrs. Fraser and Chalmers for the Longos property of the syndicate. It will be dispatched in December. A light railway to connect the various concessions of the syndicate is in course of construction, and will be forwarded to Manila at an early date.

MINING IN CORNWALL AND DEVON:

NOTES ON WESTERN MINING, EDITORIAL AND OTHERWISE.

(BY OUR SPECIAL CORRESPONDENT).

THE anxiously awaited judgment in the mining *cause celebre* Wheal Grenville v. South Condurrow was delivered on Tuesday by the Vice-Warden of the Stannaries Court, and will probably give the greatest satisfaction to the shareholders of South Condurrow. It will be remembered that Wheal Grenville claimed about £2500 for an alleged encroachment, and South Condurrow retaliated with a counter-claim of nearly £1000. The result of the judgment, independent of the costs, leaves a balance in favour of Grenville of about £100. Unfortunately for Grenville, however, the Vice-Warden has decided that they must pay three-quarters of the general costs of the trial, and the costs in a trial which lasted 13 days are likely to be considerable. The result is a striking justification of the soundness of our contention that this was eminently a case for amicable settlement, for the only people who are likely to get anything out of it are the lawyers who were fortunate enough to be engaged in the case. We must congratulate Captain Rich on the complete vindication of his good faith. The Vice-Warden declines to accept the insinuation that he had knowingly taken away rich ground which belonged to the neighbouring mine, and we cannot help thinking that the charge should never have been brought. One result of the action will probably be to induce the managers of all Cornish mines, which have neighbours, to exercise additional care when working so near to the limits of their sett. Apart from the merits of the case, most people will welcome the result, namely, perhaps, because South Condurrow, under present conditions, could ill afford to be mulcted in so heavy a sum as Grenville claimed.

WHEAL BASSET shareholders have had the satisfaction of meeting without making a call. Mr. Frank Oats, the largest share holder, presided, and pointed out that their fortunate position was rather the result of a fluke, in that a large quantity of stuff which had been broken before the last meeting had been left underground because of the water difficulty, had now been returned. There is, however, a good deal of rich ground now open, and if only the water can be coped with, there seems no reason why the mine should not continue returning the same quantity—perhaps a little more. The great object on which Mr. Oats has evidently set his mind is the sinking of the new shaft from surface, in the western part of the sett, and we have very little doubt that before long the shareholders will have entered upon this fresh outlay. That it is absolutely necessary for the proper development of the mine is admitted, and the only question is one of ways and means. To a set of shareholders who have ungrudgingly been putting their hands into their pockets for several years in order to put their property in thorough order, this extra outlay would, with tin at its present unremunerative price, be a serious tax; but for the most part we believe they have sufficient confidence in the future of the mine to set about the task as soon as a favourable opportunity presents itself. In all probability they will avail themselves of the system of contracting, which is finding favour with the more progressive mines in the county. If they can find a mining contractor who is willing to undertake the sinking of the shaft at a fixed price per fathom the work will probably be done in this way, and the advantage of such a system is obvious. The shareholders will know precisely what their shaft is going to cost them, and it will be to the contractor's interest even more than their own to have it carried on expeditiously. The committee are not likely to get such advantageous terms as have been given by the Tuckingmill Company to Wheal Agar, because there it is very much in the nature of an experiment, but they will doubtless find contractors sufficiently enterprising to undertake it.

EVERYONE must feel sympathy with Mr. McKeand, the late Chairman of the company, who, after sticking gallantly to the mine for many years, has at length been compelled to relinquish his holding of 60 shares. That Mr. McKeand should have felt himself constrained to take this course at a time when Basset, if not on the high road to dividends, is at all events looking better than she has done for some years, is particularly regrettable.

THE report of Captain Vivian to the Wheal Friendly committee is very encouraging. From it we learn that the lode still continues good, and shows no sign of any falling off. It is a very long time, we believe, since such a shoot of tin has been seen in St. Agnes. We understand that in the south part of the mine there are over 400 feet of backs; the present part of the lode being at least 300 feet from the eastern boundary.

WHO shall decide when "doctors" disagree? Mr. Arthur Strauss recently informed the adventurers of Polberro that a hundred tons of tin were coming from South Africa. Mr. Oats, who has only recently returned from South Africa, who has paid a visit of inspection to Swaziland, and who, as the principal shareholder in the largest company, and the only one, as he says, which is yet returning tin, informs the adventurers of Wheal Basset that only about 20 or 30 tons have, up to now, been sold from there, and that though 50 or 60 tons more are on the water, yet he regards 100 tons a month as "the limit of possibility in the future." Now, Mr. Strauss!

PROVINCIAL SHARE MARKETS.

THE CORNISH MINE SHARE MARKET.

MR. SAMUEL JOHN DAVEY, Dealer in Cornish Mine Shares Redruth, Cornwall, reports under date of October 25 (4 o'clock) as follows:—Our market has been very quiet this week, with but very little business doing, and there is practically nothing doing to-day. The following are quotations:—Blue Hills, 1s. to 4s.; Carn Brea, 5 to 5½; Cook's Kitchen, ⅛ to ¼; Dolcoath, 58 to 59; East Pool, 6 to 6⅛; Killifreth, 2 to 2⅛; South Condurrow, ⅜ to ½; South Crofty, ⅜ to ½; South Wheal Frances, ⅜ to ½; Tincroft, 9 to 9¼; West Frances, ⅜ to ½; West Kitty, 5 to 5½; Wheal Agar, ¾ to 1; Wheal Basset, 1 to 1¼; Wheal Grenville, 14 to 14½; Wheal Kitty (St. Agnes), 3s. to 5s.; Polberro, 1 to 1¼.

Mr. MICHAEL WILLIAMS BAWDEN, Mining and Assaying Offices, Liskeard, Cornwall, writes (October 25) as follows:—The mining market is firmer, and prices have hardened a little on the improvement of tin, which is hoped will continue; business dull and devoid of any enquiry for shares. Closing prices:—Blue Hills, ⅛ to ¼; Carn Brea, 5⅛ to 5⅜; Cook's Kitchen, ¼ to ⅜; Devon Consols, 1⅛ to 1⅛; Dolcoath, 57 to 57⅛; East Pool, 6 to 6⅛; Killifreth, 2 to 2⅛; Levant, 5⅛ to 5⅛; Phœnix United, ⅛ to ⅜; South Crofty, ⅛ to ⅜; South Frances, ⅜ to ½; Tincroft, 9 to 9⅛; West Frances, ½ to 1; West Kitty, 5 to 5⅛; Wheal Agar, ⅝ to ¾; Wheal Basset, 1⅛ to 1⅛; Wheal Grenville, 14 to 14⅛; Wheal Kitty, 8s. 6d. to 10s.

Messrs. ABBOTT AND WICKETT, Stock and Share Brokers, and Mining Share Dealers, Redruth, write under date of Thursday, October 25:—A dull market generally, with but little doing; and until tin turns, it is not likely that there will be any life in shares. With the ore at £40, there is no room for profit in Cornish mines. Quotations herewith:—Blue Hills, ⅛ to ⅜; Carn Brea, 5 to 5⅛; Dolcoath, 56⅛ to 57⅛; East Pool, 6 to 6⅛; Killifreth, 2 to 2⅛; Polberro, 1 to 1⅛; South Condurrow, ⅜ to ½; South Crofty, ⅛ to ¼; South Frances, ⅛ to ¼; Tincroft, 9 to 9⅛; West Frances, ⅛ to ¼; West Kitty, 5⅛ to 5⅛; Wheal Agar, ⅝ to ¾; Wheal Basset, 1 to 1⅛; Wheal Grenville, 14 to 14⅛; Wheal Kitty, ⅜ to ½. Tin 68.

MANCHESTER.

Messrs. JOSEPH R. and W. P. BAINES, Stock and Share Brokers, Queen's Chambers, 7, Market-street, write October 25, 1894 (noon):—The settlement has occupied the chief share of attention during the latter half of the week under notice. This, with the preparation for its adjustment after the sensationnal movements of the prior week, has restricted business, and whilst latterly several markets have shown some recovery leaves values for the most part on the downward side compared with a week ago. Home rails have received the major portion of the change for the better, and herein figures are irregular, advances and declines being pretty evenly balanced numerically. The bulk of the changes on either side are in small fractions, but amongst the declines the following are permanent—viz., Great Eastern 2½, Great Western ¾, Midland ¾, and London and North-Western ⅝. Scotch stocks, after quoting lower, have rallied on improved traffic, and whilst not holding quite the best in either case only quote fractional alteration. Caledonian Deferred being ⅛ up and British Deferred ⅛ down. In Americans a contrary move has been made, inasmuch as in the early days of the week prices showed some little strength, later weakness has wiped out previous gains, and left balance on the other side in all cases except Milks, and Denver Preference, and herein the advance still left is only 3/32 and 3/16 respectively. Notwithstanding the general weakness of the past few days, the declines in no case reach more than 3/16, and this only in the case of Central Pacific and Ohio First, the others being in very small fractions of a dollar. Canadians are lower again as regards Trunk issues, but Pacifics quote 3/16 higher. Mexican Rails quote distinctly down—Ordinary 1¼, First Preference 4, and Second Preference 2. Consols have gained ⅛ on the week. The only change in colonial bonds, &c., is a decline of ⅛ in South Australian Registered Stock. Home corporation stocks, &c., continue to appreciate, the changes for the week being without contradiction on the upward side. Blackburn Three and a-half per Cent. 1, Bristol Three and a-half per Cent. 1, Liverpool Three and a-half per Cent. ⅛, and Manchester Three per Cent. ⅛ higher. It is still worthy of note that, notwithstanding the international character of the events supposed to control market movements, the changes in foreign bonds, &c., are so slight, and at the same time irregular.—Higher; Spanish Four per Cent., ¾; Russian Four per Cent., ⅛; and ⅛ each in Egyptian Unified, Italian Rentes, and Uruguay Three and a-Half per Cent.—Lower: Argentine Six per Cent., ⅛; ditto Five per Cent., ⅛; Brazilian Four per Cent., ⅛; Portuguese Three per Cent., ⅛; Turkish, ⅛; ditto D, ⅛. A moderate number of transactions (considering the occurrence of the settlement) have been marked in the miscellaneous markets, but here and there some fairly distinct indication is to be found in changes of current prices.

BANKS, though not without some contradiction, show a majority of favourable alterations, in which Adelphi stand out prominently with rise of 1½ very rapidly marked. In company with Adelphi's come Lancashire and Yorkshire, which are ½; Imperial of Persia, ⅛; Imperial Ottoman, ⅛; and Consolidated 1-16 to ⅛ higher.—Lower; Parr's and Alliance, ½ to ¾; Union of Manchester, ⅛ to ⅛; and Bank of Liverpool, ⅛.

INSURANCE.—This market, with very little doing, shows a very general decline in values, the only exception to which is a rise of ⅛ in Boiler Insurance and Steam Power. Lower: Liverpool and London and Globe, ⅜; Royal, ⅜; London and Lancashire, 7-16; Commercial Union, ⅛; Maritime, 3-16, Union Marine, 3-16; British and Foreign Marine, ⅛; Manchester Fire, ⅛; and Reliance Marine, 1-16.

COAL, IRON, &C.—Business very straggling. Cammells are up 2 and Earle's Shipbuilding ⅛. Lower: Bolckow's £12 paid, ⅛; ditto fully paid, ⅛ to ⅜, and Ebbw Vales, ⅛

MINES.—Great Laxey have improved ⅛ and Tintos 3-16. On the other hand Mason and Barry are ⅛, Ooregum Preference ⅛, Tharsis ⅛, and Cape Copper 1-16 lower.

COTTON SPINNING, &C.—Market better, in some cases fairly better bids being made, but in the rest more in tone than actual quotations. Low priced lots are pretty quickly absorbed, however.

TELEGRAPHS, &C.—A few dealings in National Telephone ordinary all marked here. Telephones no alterations. Telegraphs lower where altered. Anglo preference ⅛, Western and Brazil ⅛, and West India and Panama ⅛.

BREWERIES furnish very few changes. Mercurial Allsopps have not shown the variations prevalent for some time past, and are 1 down on the week. A fall of ⅛ to ¼ in Manchester ordinary is the only other alteration.

MISCELLANEOUS.—Not much doing beyond some stir in Ship Canals. Blackpool Winter Gardens are ⅛, Coats ordinary ⅛, and Eastmans ⅛ better. Lower: Fowler Brothers ⅛, Henrys ⅛, Listers ⅛, Pacific Steam ⅛, Primitiva Nitrate ⅛, Salt ordinary 1-16, United Alkali ordinary ⅛, and Northern Assets 6d. Ship Canals beginning fairly steady, held up till about Monday, when preference weakened, but ordinary kept steady; since then both have run down quickly, and on the week ordinary are down ⅛ and preference ⅜, and these declines are after some recovery from lowest prices of the week.

LATER (4 P.M.).—Nothing much in the way of change in home rails to-day, if anything a little stronger. Americans trifle easier; Trunks, no change worth recording. The feature of the day has been the further decline in Mexican rails, the dividend declaration (¾ on first preference) sending them down very sharply, and accentuation the fall previously recorded. Ship Canals have mended to-day on both issues, closing ordinary 2 3-16 to 2 5-16, and preference 3⅛ to 3 3-16, a fair swing back from the low prices of yesterday.

SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

STIRLING.—Mr. J. GRANT MACLEAN, Stockbroker and Ironbroker (October 24), writes:—During the past week the markets have been more active, although the reports of trade generally, or of the metal markets, show no particular alteration. The fortnightly settlement is now in progress, and transactions entered into are for November 14 a 19 days' account.

In shares of coal, iron, and steel companies the movements are irregular. Fifeshire Main Collieries Ordinary have advanced to 17s. 6d. Steel Company of Scotland shares have been flat on rumours that the new Debenture Stock is not being well taken up. The price declined from 47s. to 30s., and is now 35s. Wilson's and Clyde shares are now dealt in ex the new, these new shares, 5s. paid, being saleable at about 70s. Bolckow Vaughan are at 12, Ebbw Vale 8½, Marbella 60s. to 65s., Niddrie 42s. 3d., Shott's iron, 15.

In shares of copper concerns, there has not been much business doing. At one time Tharsis declined to 95s. 9d. and Tinto to 14 5-16, but are both now better. Arizona are at 8s. 9d., Cape 30s., and Copiapo 40s.

In shares of gold and silver mines a considerable amount of business continues to be done. Montana declined from 14s. to 13s. The half yearly report has been issued, showing a profit of £15,859 to set against a previous debit of £20,034. African Recovery shares have been largely dealt in from 46s. 6d. down to 35s. 9d., on realisations after the recent advance, accompanied by a rumoured hitch in the agreement arrived at for fixing the royalties and extending the time of the patent. Cassel touched 22s. 9d., but are also easier about 19s. A decision is expected in the London Law Courts in connection with this company's patents within the next few days. Broken Hill shares have been largely dealt in, and declined from 54s. 3d. to 47s. 6d., on rumours that the last dividend had been paid out of reserve, but they are now 50s. 6d. Alexandra Estates are at 6s., on the usual 1s. dividend being declared for November. Blue Spur, 2s.; Big Golden Quarry, 6d.; Bayley's Reward, 21s.; Bufflesdoorn, 31s. 6d.; Consolidated Gold Fields of South Africa, 53s. 6d.; Caratal, 9d.; Durban, 5⅛; Day Dawn P.C., 4s. 9d.; Day Dawn Block, 7s. 9d.; East Rand, 24s. 3d.; Glencairn, 42s.; Geldenhuis, 5 11-16; Gold Fields Deep, 37s. 6d.; Golden Gate, California, 4s.; Klerksdorp Estates, 2s. 9d.; Jumpers, 5⅛; Knight's 31s.; Langlaagte Royal, 61s. 3d.; Lisbon, 2s. 6d.; Mallina, 20s.; May, 25s. 6d.; Mozambique, 13s.; Mysore, 50s.; Nigel, 72s. 6d.; New Primrose, 95s.; Otto's Kopje, 3s.; Ophir, 2s. 3d.; Paarl Central, 23s.; Rand 15⅛; Richmond, 10s. 6d.; Sutherland Reef, 15s. 3d.; Silver King

2s. 9d.; South African Gold Trust, 33s; Sheba, 28s.; Tharsis Development, 10s.; Tolima A, 8⅞ to 9; Van Ryn, 53s.; West Australian Mining, 9s. 2d.; West Australian Gold Fields, 64s.; and Wolhuter, 66s. 3d.

In shares of miscellaneous companies prices are generally easier. In oil companies Broxburn are at 7½, Linlithgow 7s. 6d., Pumpherston 5. Lawes' Chemical are at 7⅝, and Nobel's Explosives 14⅜.

EDINBURGH.

Messrs. THOMAS MILLER and SONS, Stock and Share Brokers, 69, Hanover-street, Edinburgh, report as follows under date of Oct. 25:—The market has been quiet. Railway stocks were depressed for a time, but at the close prices are in most cases nearly the same as those of last week. Canadians and Americans lower. Edinburgh Corporation Three per Cent. stock is enquired for at 105¼. Bank shares lower where changed, British Linen has declined from 386½ to 386; Royal from 227 to 225½; Union 21⅞ to 21⅝; Commercial from 69 to 68½. Insurance shares lower. Liverpool, London, and Globe have declined from 47⅛ to 46¾; Northern from 67⅝ to 67⅜; Royal from — to 50⅜; Lancashire from 5⅞ to 5¾; Commercial Union from 34⅜ to 34⅛. Scottish Accident have improved from 36s. to 40s.; Scottish Imperial from 30s. to 30s. 9d. Fife Main Colliery shares have advanced from 10s. to 20s., and the Preference from 67s. 6d. to 82s. Shott's Iron have declined from 20 to 15. Steel Company shares had a sudden and heavy fall—the change is from 47s. to 35s. Rio Tinto have improved from 14 11-16 to 15 3-16 Tharsis have declined from 98s. to 95s. 9d. In oils Broxburn have fallen from £7 10s. 6d. to 7½; Linlithgow from 12s. 6d. to 8s. 6d.; Pumpherston from 5⅛ to 5. Distillers have declined from 16⅞ to 16⅝. United Breweries have risen from 90s. to 93s. Coats 10s. higher at 203⅜. The following are the latest prices of deposit receipts of reconstructed Australian banks—viz.: Australian Joint Stock 16s. 3d. per £; Bank of Victoria 16s. 3d.; City of Melbourne 12s. 3d.; Commercial Bank of Australia 16s. 6d.; London Bank of Australia 17s. 3d.; National Bank of Australia 17s. 3d.; Queensland National Bank 15 per £.

MINING NOTES FROM JOHANNESBURG.

By H. BUSH, M.E.

Spring Coal Fields v. Bocksburg and Middleburg Coal Fields.

Coal being the great factor in making low grade ores pay, I thought it would interest your readers generally to learn something about the position of the above fields. The coal seams proved up to date clearly show that the supply is practically unlimited, and more than sufficient to last out the gold mines. The most important point to be considered is not one of supply, but rather which is the field that can be worked with most profit to investors and the mines generally.

Middleburg Coal Fields.

Considerable business has been done lately in securing options on farms in this district, and those interested argue that this part of the Transvaal will be the coming coal fields, and they also argue that the coal is of the very best quality, and of unlimited supply. Granting that the quality is good, and the supply unlimited, the most important point of all is the cost of carriage from the fields to the mines, which is fully 200 miles, and which must tell against the Middleburg fields. We must look nearer to home for a good and cheap supply to keep the lower grade mines going, and from developments that have recently occurred, the coming coal fields, to my mind, are the Springs, situated on the Bocksburg railway line, and near the Main Reef series. This field is on the eastern extension of the Rand, and fully 20 miles of seam have been opened up. Starting from the Springs Railway Station, the first mine going east is the Springs Colliery, but the coal is inferior, and the mine a poor one. Going further east of the extension is the Cassel Colliery. The prospects of this mine are unequalled in Africa, and it is likely to become a great favorite, arrangements being made to have the shares quoted on the London market. The property consists of 600 acres, and the seam being worked is in places 30 feet wide, and at the present rate of consumption the mine will last 25 years. The capital is £75,000; present profits are about £2000 per month, which will shortly be increased to £3000, and it can be expected that dividends will be paid at the rate of 40 per cent. per annum. The shares are now standing in this market at 25s., and I consider them cheap at double that price. The mine looks splendid, surface arrangements are good, and everything points to a most perfect and complete plant. It has been proved going further east that the quality of the coal improves, and the Cassel coal has been proved to be of excellent quality and improving as the mine is opened up. It is probable that there will be a 10 per cent. dividend this year, and another 10 per cent. in April next year. The miners working on this property are large holders of shares, and are still buying them. This mine at the present market value should pay back its capital in about three years, and at present prices the shares are one of the cheapest and most profitable investments in Africa.

Brak Pan Colliery (Transvaal Coal Trust Company)

has a capital of £450,000, shares standing at a value of 14s. This mine makes a profit of about £4500 a month, which proves how absurdly cheap the Cassel shares are. The Brak Pan shares are considered here cheap and good buying, which shows that the Cassel Colliery shares only want bringing prominently before the public to bring their prices up to double what they are standing at now. Adjoining this mine is the Great Eastern Mine, which is now being opened up, the future prospects being good. Messrs. Lewis and Marks are heavily interested in this property, and they will have to pay the Cassel's Colliery a heavy royalty for the use of their railway. Still further east this seam has been opened up for nearly 20 miles, and undoubtedly, to my mind, it looks like becoming the coal field of South Africa, from which the mines on the Rand will ultimately obtain the bulk, if not the whole, of their supply.

Gold Fields

and Chartered shares should be watched. It is rumoured here on good authority that they will shortly have big rises. Hammond's private report on Matabeleland is said to be most favourable, and likely to influence the price of Chartered shares considerably.

Geldenhuis Main Reef

is looking well, and the shares should improve considerably on present price of 15s.

New Kleinfontein.

The mine is improving every day, and the output will be increased. Well developed, Buy these shares at present price, and buy on every fall.

New Chimes.

I have thoroughly and carefully examined this property and gone through all the workings, and am quite satisfied as to its future. The mine is well opened up, and the reefs in all levels are of a most promising nature. Dividends should be forthcoming at the rate of 40 per cent. Strongly recommend these shares as a safe and sure investment, and the price should go up very much.

Jumpers

is looking well, and there is likely to be a substantial movement shortly. You must watch them closely, and buy.

AN important discovery of a large and rich deposit of platinum ore is reported in the Sudbury mining district of Canada. The ore was round in the township of Snider, near the Tam O'Shanter Nickel Mine.

THE tin mines at Noreuga in the Giridih sub-division of Hazaribagh, are said to be the only tin mines in Bengal.

SPECIAL CORRESPONDENCE:

COLONIAL AND FOREIGN.

OUR PARIS LETTER.

South African mines.—Gold mining in Siam.—An auxiliary to cyanide.—The Societe des Metaux.—A new alloy.—Gold mining in Greece.

THE part which Parisian investors are playing in the development of the South African mines is not so large or profitable as they could wish. At the beginning of the Transvaal boom some French engineers were sent out to inspect properties with a view to their being acquired by French companies, but the reports were not considered good enough to justify the expenditure of any extensive capital in the working of the Rand mines. The profits that are now being secured in the exploitation of the deep levels have opened the eyes of investors to the opportunities which they have lost. In the absence of other sources of investment, the South African mines have come prominently to the fore, and the attention of investors is confined almost entirely to these securities. Buyers of this scrip complain that they are not permitted to benefit to any large extent from new enterprises in the Transvaal, as their co-operation is not invited until after the English capitalists have made what they can out of the concerns. At the same time, speculation in Rand mining scrip is sufficiently remunerative to keep these securities before the public, and great interest is shown in the placing of fresh concerns upon the market. Some shares of the Consolidated Gold Fields of South Africa have this week been introduced upon the Bourse, and they were at once taken up by buyers who anticipate a steady advance in quotations. The public confidence in Robinsons is maintained by the favourable statistics that have been presented this week, and the price is consequently very firm. In fact, the quotation for Robinsons has settled down at a figure that undergoes very little variation, and there is not much scope for speculation. Buyers, as a rule, keep their shares, and it is comparatively rare that any are to be found on offer.

The Watana Gold Mining Company has been floated under circumstances which indicate an unshaken confidence in the future of this undertaking. All the money was subscribed upon the Bourse, and no appeal was made to the public. The quotation immediately advanced from 200 francs to 385 francs, and the figure has now settled down to 290. It seems somewhat strange that so much readiness should be shown by capitalists to take part in an undertaking upon the faith of representations that cannot be accepted as anything like conclusive. The prospecting has been carried out upon such a limited scale that nothing definite can be known about the new gold fields in Siam, and the samples assayed vary to an extent that opens up considerable doubt as to the value of the auriferous veins lately discovered at Watana. Nevertheless, French capitalists have been so accustomed to see the best auriferous properties in the world monopolised by other nations that they are only too happy to embark upon an undertaking which will allow them a free hand in gold mining development. Past experience has shown them that nothing is to be gained by an excess of caution, and that if they are to take an active part in gold mining they must be prepared to run a certain risk. In the event of the anticipations of the promoters of the new company being fulfilled, the enterprise will assuredly be one of considerable profit to the shareholders. It is expected that in a couple of months' time the operations will be begun at the Watana Mine upon an extensive scale.

One of the drawbacks of the cyanide process is the difficulty of preventing any waste of the poisonous liquid which is said to be responsible for the loss of many valuable animals at Johannesburg. The overflow from the cyanide tanks, and the accumulation of immense heaps of dirt impregnated with prussic acid outside the works, consitute a danger which will grow with an extension of the process on the Rand. One means of overcoming this difficulty would seem to be afforded by the discovery of an antidote by a Hungarian chemist, who has found that nitrate of cobalt, which he has been the first to produce, will neutralise the poisonous effects of cyanide of potassium and prussic acid. Dr. Johann Antal has already saved the lives of more than 40 persons who have been poisoned by prussic acid, and there is no doubt that the new nitrate of cobalt would prove an invaluable auxiliary to the cyanide process in South Africa.

The position of the Société des Métaux has much improved during the past few months, and if some difficulty has been experienced in the administration of the concern it is certain that the internal management has not suffered. The annual report just issued shows that the company has had to meet with great difficulties owing to the very low price of copper, but the profits secured are sufficient to justify the hope of larger dividends being paid in the future. The shareholders are, upon the whole, satisfied with their prospects, and the values of shares have perceptibly strengthened. It is evident, however, that economy will alone permit of the company making headway in the future, as nothing can be expected yet awhile from an advance in copper. All descriptions of copper scrip are very weak, and holders are anxious to get rid of them.

A French chemist, M. Placet, has succeeded in producing a perfectly pure chromium by means of electrolysis, which will allow of the metal being placed on the market in sufficient quantities to meet all industrial requirements. The pure chromium differs from the metal produced in the ordinary way. It has a beautiful white colour that is unaffected by exposure to the air or by contact with acids, and it has the further quality of being exceedingly tough and less fusible even than platinum. Until chromium was produced in its pure state its scope as an alloy was strictly limited to the manufacture of chrome steel, as the presence of iron and carbon prevented its being alloyed with other metals. The pure chromium has practically no limit to its application as an alloy. A very small quantity will suffice to give great toughness and malleability to almost any metal, which is also capable by this means of bearing a very high polish. The toughness of copper, for instance, will be nearly doubled by an alloy of ½ per cent. of pure chromium, and the possibilities of aluminium are in the same way enormously increased, as any degree of hardness and toughness can be secured by a more or less addition of chromium as an alloy.

French capital has been employed during the past few years in developing the mineral resources of the Island of Milo, where considerable quantities of silver, manganese, sulphur, and other minerals are known to exist. At first, attention was given particularly to the deposits of silver, and a grant of money was made by the Greek Government with a view of carrying on prospecting operations. As the ore is generally poor in silver it has not been possible to make much headway with the exploitation of this metal, and capital has been chiefly directed to the working of the manganese deposits by the French concern, Serpieri et Cie, who produce 18,000 tons a year, of which 13,000 tons are sent to England, France, and America. A considerable quantity of sulphur is also produced, and is consumed almost entirely by the vine-growers in Greece.

REVIEWS.

THE STEAM ENGINE.

The Steam Engine and Other Heat Engines. By J. A. Ewing, M.A., B.Sc., F.R.S., M.Inst.C.E., Professor of Mechanism and Applied Mechanics in the University of Cambridge. (Cambridge: At the University Press, 1894. London: C. J. Clay and Sons, Ave Maria Lane, E.C.) Price, 15s.

Books on the steam engine are so numerous, and in many instances of so little value, that we are prone to hope we may be spared many further productions on this subject. This work, however, which Professor Ewing has recently published will be read by engineer and student with great interest and profit. We doubt whether any text-book gives in so few pages a more complete and concise account of the steam engine and other heat engines. Based, as the author in his preface states, on an article written by him for the "Encyclopædia Britannica," it has been so added to and rewritten that except for parts of one or two chapters it is virtually new. His endeavour throughout, the writer says, has been to make evident the bearing of theory on practical issues. Portions of the book serve in some measure as a manual for the steam laboratory; and considerable use has been made of the entropy-temperature diagram as a means of exhibiting thermo-dynamic actions, Professor Ewing believing that this construction only requires to be better known to be widely appreciated by engineers. The author has taken 778 foot pounds as the value of Joule's equivalent, the recent works of Griffiths' and Rowland, in conjunction with the later researches of Joule himself, shewing that this number must be accepted in the place of the familiar 772.

Watt's note, appended to the article "Steam Engine" in Robinson's "System of Mechanical Philosophy," is reproduced in entirety with the chapter on the "Early History of the Steam Engine." In this note Watt said: "I perceive that in order to make the best use of steam, it was necessary, first, that the cylinder should be maintained always as hot as the steam which entered it." The independent condenser and air pump were the outcome of the pursuance by Watt of this reflection. The author, in his chapters on the actual behaviour of steam in the cylinder and compound expansion, shows that in the furtherance of this thought depends all steam engine economy. The Cornish engine is pointed out in the first chapter as interesting, as being the earliest form which achieved an efficiency at all comparable with that of good modern engines. The thermodynamics of the steam engine, and also further points in the theory of heat engines, are next discussed in a very clear and exhaustive manner. Then follows a chapter on the actual behaviour of steam in which the reasons are considered why the real action of steam in a steam engine differs from the ideal action. The perusal of this chapter demonstrates in what a marvellously brief, yet clear manner, Professor Ewing has stated his subject. The testing of the steam engine forms the subject of a chapter, in which is explained the indicator, and the method of calculating 1 h.p. Valves and valve gear are next discussed, whilst governing, the work on the crank shaft, and the production of steam, are dealt with theoretically and practically in the succeeding chapters. The author displays his marked capacity for grasping the distinguishing feature of a type in the chapter on forms of the steam-engine, in which he refers in particular to the Thornycroft, Babcock and Wilcox, Webb, Worthington, Pulsometer, Willans, and Brotherhood types. Air, gas, and oil engines conclude the work; the subject of liquid fuel, now engrossing so much attention, is, however, not very fully treated. We confidently recommend this book to the student, who will find profuse reference to the literature of the world on the subject.

A NOTABLE GEOLOGIST.

The Life and Correspondence of William Buckland, D.D., F.R.S. By his Daughter, Mrs. Gordon. (London: John Murray, Albemarle-street.) Price 12s.

This book will be welcomed by all lovers and students of geology, for not only is it interesting as a biography of a pioneer in this branch of science, but as a work of geological history. Since the death of this remarkable man, geology has made rapid and wonderful progress, but none the less does it owe a great debt of gratitude to one who by his incessant labours and discoveries was counted worthy to be twice President of the Geological Society and first President of the British Association. Mr. Boyd Dawkins rightly says that Buckland stands in the foremost rank of the founders of this important branch of science. He was a geologist in his teens. As a boy he took a keen interest in the rocks and fossils of his Devonshire home and at Winchester, where he went to school. At Oxford he turned his rooms into a museum, and Murchison has graphically described him sitting in the only empty chair, in his black gown, cleaning out a fossil bone from its matrix, and surrounded by rocks, shell, and bones in dire confusion. In 1813 he was appointed Reader in Mineralogy, and his influence as a lecturer was so strongly felt that five years later the Readership of Geology was created for him in the University.

He was in close touch with the most brilliant men of his day. Whateley, Whewell, Sir Robert Peel, Cuvier, Humboldt, Liebig, and Sir Joseph Banks were among his friends. His influence, however, was felt as a teacher and master far beyond Oxford. To him Murchison owed his first lesson in the field, and in 1831 turned to him for advice and assistance when he had decided to attack the difficult problem of Welsh geology, and from Buckland obtained the clue to the true sequence of the rocks below the Old Red Sandstone on the banks of the Wye, that led ultimately to the Silurian system. To him, too, is due the discovery of the value of the phosphates in the coprolite beds, that has contributed so much to the development of modern agriculture.

MACHINE DESIGN.

Problems in Machine Design. By Chas. H. Innes, M.A., Engineering Lecturer at the Rutherford College, Newcastle-on-Tyne. (The Technical Publishing Company, Limited, Manchester.)

The aim of this book is to supply to the engineering student preparing for the Honours' Stages of the Technological Examinations, a series of problems with which in the future practice of his profession he will in all probability be brought face to face, and which in this work are solved by the application of the usual formulæ employed by machine designers. The problems are shown for the most part from questions relating to engines and boilers, both marine, stationary, and locomotive, and relate to the strains to which machinery is subject, and the best proportions to be adopted in order to resist them, with an ample allowance for safety. To the student of mechanical engineering this book will be of especial utility, and although the author apologises in its preface for its incompleteness, there can be no doubt but that the carefully explained and illustrated solutions of the problems dealt with will be of considerable utility not only to the student, but also to the qualified engineer, who, having passed his examinations, is desirous of keeping his store of knowledge in working order.

COMPANY FINANCE.

Reports, Balance Sheets, Dividends, &c., of Mining and other Companies.

United Langlaagte Gold Mining Company.

The eleventh half-yearly report states that the company's mining property now consists of 88 claims and 14 Bewaarplaatsen, equal in all to over 96 claims, making the mine one of eight claims, or 3200 feet deep. The dispute in connection with the company's mynpacht was satisfactorily arranged by the Langlaagte Royal Gold Mining Company (Limited) and the Rand Mines (Limited) purchasing from the company the freehold of the mining ground held by them under license upon the estate, the former company paying the sum of £13,750, and the latter £25,750 in respect thereof. The purchase price payable by the Rand Mines (Limited) will fall due upon June 21, 1895. In the valuation of the property these sales have been taken into account. Upon the reconstruction of the company the amount formerly standing to the debit of profit and loss account was wiped off, and the sum of £35,719 4s. 9d. written off the book values of the company's assets. The amount due to the company by the Rand Mines has been placed to the credit of suspense account, and will be utilised to cover the cost of the development now being pushed forward for the purpose of placing the mine well ahead of the mill. By this means all profits earned upon the starting of the cyanide works and upon the restarting of the mill on or about February 1 next will be available for distribution amongst shareholders, and thereafter costs of development will, as heretofore, be charged direct to profit and loss.

Gravel Gold Mines of Colombo.

The directors have issued their report as follows:—The directors now present to the proprietors the first annual report of the company. As the proprietors are aware, this company was formed to take over the mines and property of the old company of the same name, part of the consideration being 100,000 shares of £1 each, with 17s. credited as paid thereon, to be offered to the shareholders in the old company. It is satisfactory to be able to state that the whole of these shares have been applied for and allotted. The circulars which have been issued to the proprietors from time to time have informed them that the mine has been but intermittently worked during the period under review, owing to the water question, and also to the trouble with the Rica syphon. The latter hindrance has been overcome by the construction of the new ditch, and the directors believe that the water question will ere long be definitely settled in the company's favour. The accounts, duly audited, cover a period of 18 months, and are made up in London and Colombia to the 30th June. During this time the mine has been worked for only 5418 hours, with a result of 1071·84 ounces of gold produced, realising £3996 1s. 11d. The last run of 950 hours yielded a profit of £950, and this result compares most favourably with those obtained from the best hydraulic mines in the neighbourhood when first worked, and proves that when washing can be carried on continuously very profitable results can be relied upon.

Frontino and Bolivia Gold Mining Company.

The directors have received advices from the mines dated August 23 and September 10, also a letter from Messrs. Restrepo dated August 13. The results for the month of August were not ready when the letter of September 10 was dispatched, and, in consequence, Mr. Eustice intimated that he would send same by telegraph. This he has done, and has taken advantage of the opportunity to mention the results for September also. The results for the two months of August and September, after adding to cost payments made in London, are as follows:—Estimated value of gold: August, £6500; September, £8400; total, two months, £14,900. Estimated cost: August, £6083; September, £5740; £11,823; estimated excess of returns, two months, £3077.

Sunburst Gold Mining Company.

Under date, Charters Towers, September 8th, the manager writes that the tribute crushings for the fortnight have given us a profit of £68 19s. 7d. One crushing of 19 tons went 3 ounces per ton. The directors had ordered the accounts for the year to be made up to September 30th. These should reach the London office about one month from date, and the annual general meeting will be held in December, at which the report of the directors on the present condition and prospects of the mine, together with the balance sheet for the 12 months ending September 30th, will be submitted to the shareholders.

The Montana Mining Company.

According to the report of the directors, the revenue account shows a profit of £15,859 6s. 6d., which has been applied towards the reduction of the loss of £20,034 19s. 9d., shown in balance-sheet of 31st December, 1893. The expenditure charged to capital account, amounting to £2622 9s. 4d., embraces "cost of re-timbering No. 1 shaft" ($8144·43) and "legal expenses in connection with the lawsuits" ($4548·30). During the six months under review, the mill reduced 34,613 tons of ore, which yielded in bullion bars and concentrates (on assay coinage value) $436,446, equivalent to $12·61 per ton. The actual realised and realisable value of the ore amounted to $357,900, the difference on the coinage value being $78,546 or 2·02 per cent. on the gold, and 54·45 per cent. on the silver produced, The average net realisable value of the ore treated was, therefore, $10·34, say £2 2s. 9d. per ton. The proportionate money value of the precious metals contained in the ore was gold 83·07, and silver 16·93 per cent.

Alexandra Estate.

In their report for the half-year to August 31 the directors state that no further work has been done on the property, for the reason set forth in the last report. For about a month a prospector has been engaged in prospecting for the reefs which have lately been opened up on neighbouring properties, and the directors are now awaiting results. Indications, however, have not been encouraging so far. During the past half-year 5643 trees have been planted, making the total planted up to date about 273,000 trees. It is intended to further increase the number during the ensuing season. The £4000 loan advanced to the Main Reef Gold Mining Company has been repaid with interest at the rate of 5 per cent. per annum. The profit and loss account shows a loss of £916, increasing the debit balance from £9398 to £10,314. The principal balance-sheet items are: Creditors, £36; due from the Cape of Good Bank (in liquidation), £2104; "investment," £15,668; debtors, £153; and cash, £1875.

New Queen Gold Mining Company.

The total quantity of stone crushed during the 12 months was 6929 tons, averaging 1 ounce 17 dwts. 3 grains of gold per ton. The corresponding figures for 1892-93 were 7337 tons, showing an average of 1 ounce 5 dwts. of gold per ton. The gold has realised 8d. per ounce more than the price obtained in the previous 12 months. The quantity of stone crushed for the public at the company's mills has been 7361 tons, and the receipts £5977 9s. 6d. In the previous year 7485 tons were crushed, and the receipts were £6587 12s. 7d. Dividends of 6d. per share were paid in September and December, 1893, and February and April, 1894, respectively, making altogether 2s. per share, or £15,891 10s. paid out of the year's income. The profit for the 12 months (exclusive of the sum of £2539 16s. 5d. brought forward from last year) has amounted to £19,318 4s. 2d.

De Beers Consolidated Mines.

The accounts for the year to June 30 last show a revenue of £2,820,172 from diamonds, and £88,338 from dividends, interest, and rents. The total revenue was £2,923,782. The working expenses were £1,005,33—7£341,165 was paid out by way of interest on debentures and on the capital of leased companies, and £136,634 was set down for depreciation. After allowing for claim rents, charges, and other expenses, a profit of £1,233,198 was obtained. Including the sum carried forward on June 30, 1893, the balance of profit amounted to £2,015,605, out of which £301,700 was provided for the debenture redemption funds, £987,238 (25 per cent.) was paid out in dividends, and £726,666 is carried forward.

— The manager of the NEW KLIENFONTEIN ESTATE AND GOLD MINING COMPANY has issued an interim report for the four months, during which the company has been in regular operation. The profits from mining and milling have been £7822 19s. 1d., and from cyanide £3401 4s. 8d., equal respectively to 9s. 5d. and 5s. 6d. per ton. An amount of £4246 10s. is being written off the profits, at the rate of £707 15s. per month, to redeem the development work done during the period in which the mill was shut down, and this amount, it is stated, will be entirely wiped off by the end of October.

— The BIRTHDAY GOLD MINING COMPANY has been reconstructed with a capital of £63,500 in £1 shares. The debenture holders and other creditors will receive 36,000 shares, the old shareholders will have 5000, working capital will be provided by the issue of 15,000, and the remaining 7500 will be held in reserve. It will be seen that the old shareholders are almost extinguished, having only one new share for every 40 old shares.

— The MOZAMBIQUE COMPANY has received advice from Beira, dated September 8, stating that the receipts for the month of June amounted to $26,630 141 reis, which, at £220 per conto of reis, amounts to about £5830, The receipts for the half-year ended June 30, 1894, show an increase of $19,947 326 reis, which at the same rate, amounts to about £4390, over those for the corresponding period of 1893.

— The AFRICAN GOLD RECOVERY COMPANY (LIMITED) announce that the warrants for the dividend of 10 per cent. payable on the 23rd inst. have been posted.

— The CONSOLIDATED TIN AND COPPER COMPANY has been formed at Montalbion, Queensland, in 16,000 shares of 2s. each, to work the Surprise claim.

— The BROKEN HILL PROPRIETARY COMPANY (LIMITED) report that the usual dividend of 1s. per share has been declared, payable on November 21.

— Notice is given of the withdrawal of the advertisement inviting tenders for the purchase of 15,000 reserve shares of the NEW CROCUS COMPANY.

— Messrs. I. Thomson, T. Bonar and Co. notify that the coupons due November 1 next on the Imperial Russian Three per Cent. Loan of 1859, and of the LEHIGH AND WILKESBARRE COAL COMPANY'S first mortgage 6 per cent. sterling bonds will be paid at their counting-house, on and after that date, Saturdays excepted.

— The shareholders in the JOHANNESBURG PIONEER GOLD MINING COMPANY met and sanctioned the raising of a sum of £30,000, either on a bond having a first charge on the property or on first mortgage debentures.

— At the half-yearly meeting of the RUBY COMPANY the directors reported that they continued to meet current expenses by the revenue received from investments. The company had loaned £6000 to the Johannesburg Pioneer Company at 8 per cent., which had yielded £50 in excess of the expenses for the half-year. The property was intact and under constant supervision.

— The accounts of the CONSOLIDATED GOLD FIELDS OF SOUTH AFRICA (LIMITED) for the year ending June 30, 1894, show a net profit (exclusive of the sum of £32,455 brought forward) of £308,963, and the directors recommend a dividend of 15 per cent., carrying forward £121,463.

The Subscription List will open on Monday, October 29th, and will close on Tuesday at 4 p.m. for town, and on Wednesday at noon for the country.

The NORTH QUEENSLAND MINES AGENCY, Limited, invite Subscriptions for the undermentioned Capital.

CARLYLE GOLD MINES, Limited.

(YILGARN GOLD FIELD, WESTERN AUSTRALIA).

Incorporated under the Companies' Acts, 1862 to 1890.

Capital £75 0.0, in £75,000 Shares of £1 each,

Of which 50,000 are now offered for Public Subscription, payable as follows:—On application, 2s. 6d. per share; on allotment, 2s. 6d. per share; on 1st December, 7s. 6d. per share; on 1st January, 1895, 7s. 6d. per share—£1.

DIRECTORS IN LONDON.

A. C. Bicknell, Esq., M.I M.E.
Hon. M. Hume Black (late Minister for Lands, Queensland).
H. Duncan, Esq.
J. B. Guthrie, Esq.
Sir James D. Mackenzie, Bart., of Tarbat, N.B.
J. McMillan, Esq. (Director Surrey Waterworks).

LOCAL DIRECTORS IN AUSTRALIA.

C. L. Morgan, Esq. (Member of the Legislative Assembly), Coolgardie, W.A.
George Phillips, Esq. (Member Legislative Assembly, Queensland) (Chairman North Queensland Mines Agency, Limited).

MANAGERS FOR W. AUSTRALIA.

North Queensland Mines Agency (Limited), Perth, W.A.

BANKERS.

London—Consolidated Bank (Limited), 52, Threadneedle Street, E.C.
Australia—Bank of Australasia, Perth, W.A.
Brokers—Messrs. Mumford and Bicknell, 1, St. Michael's-alley, Cornhill, E.C. and Stock Exchange.
Auditor—E. Leyton Bennett, Esq., F.C.A., 66 and 67, Cornhill, E.C.
Solicitor—Robert J. Fewford, Esq., 48, Finsbury-pavement, E.C.
SECRETARY AND OFFICES (pro. tem.),
Fred. S. Hobbyn, Esq., 10, Metropolitan-chambers, Broad-street, E.C.

This Company is incorporated for the purpose of acquiring two valuable gold mining leases numbered 216 and 218, known as the "Carlyle and Pass By," comprising an area of 16 acres, and situated at Parker's Range on the famous Yilgarn Gold Field, Western Australia.

Reports on these mines have been made by Mr. James B. Spence, B.A. (Camb.), Mining Engineer, and Mr. A. Jacobson, Manager of the McIntosh Gold Mines, Limited, Parker's Range, which are given in full in the prospectus, together with extracts from Mr. Jacobson's letters, and it is on these documents that the statements therein are based.

The work of development has been proceeding upon these claims during the last two years.

There have been sunk upon the reef, which can be traced through both properties, seven shafts, varying in depth from 40 to 152 feet, in every one of which remunerative lodes have been struck.

From No. 5 Shaft, which improves in depth, 40 tons of ore have produced 130 ounces.

Nearly 1000 tons from various points have been crushed, including surface stone, and have produced variously from 10 dwts. to 4 ounces per ton.

The reefs increase in width and richness with depth.

The last reported crushing was of a mixed lot of 31 tons, which produced 60 ounces.

These results do not take into account any yield from the tailings.

Very rich ore has recently been struck in No. 3 shaft, showing 20 to 30 ounces to the ton, none of which is included in the above-mentioned crushings.

Immediate returns may be expected as soon as the machinery is erected.

Water has been struck at about 100 feet. Besides this, a supply is procurable from a lake in the vicinity, distance about ¾ of a mile.

The vendors have fixed the price to be paid for the property at £60,000, payable as to £.000 in cash and £58,000 in cash or shares, at the option of the directors.

Prospectuses and forms of application for shares can be obtained from the Bankers, Brokers, Solicitor, Auditor, and at the Company's offices.

The LIST for SUBSCRIPTIONS will OPEN on TUESDAY, the 30th day of October, and will CLOSE THE SAME DAY, at 4 p.m., for LONDON, and at 2 p.m. of the following day for the COUNTRY and ABROAD.

HANNAN'S REWARD GOLD MINING COMPANY (LIMITED).

HANNAN'S, WESTERN AUSTRALIA.

Incorporated under the Companies Acts, 1862 to 1890.

CAPITAL, £70,000,
Divided into 70,000 Shares of £1 each.

ISSUE OF 40,000 SHARES.

Payable 2s. 6d. on Application, 7s. 6d. on Allotment, and the balance in two calls of 5s. each at intervals of not less than two months.

Working Capital, £22,000.

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CHARLES F. JACOTET, Esq., 41, Threadneedle Street, E.C.
H. WIDENHAM MAUNSELL, Esq., 83, Cromwell Road, S.W. (late of Melbourne and New Zealand)
*T. B. EDWARDES, Esq., 14, Craven Hill, Lancaster Gate, W.
*THE HON. AGAR WYNNE, late Solicitor General and Postmaster General of Victoria, Melbourne.

*Will join the Board after Allotment.

MANAGER.

W. H. CORBOULD, M. Australian I.M.E.: M.American I.M.E., Hannans.

BANKERS.

London and South Western Bank (Limited), Fenchurch Street, London, E.C., and Branches.
Western Australian Bank, Perth, and Branches.
(London Agents: Bank of Adelaide, 69, Cornhill, E.C.)

SOLICITORS.

Messrs. DIXON, WATTS & ELKIN, Savoy Mansions, The Savoy, Strand, W.C.

BROKER.

EDWARD ROEHRICH, Esq., 3, Copthall Chambers, E.C., and Stock Exchange.

SECRETARY AND OFFICES.

F. P. BAXTER, BARTHOLOMEW HOUSE, BARTHOLOMEW LANE, LONDON, E.C.

ABRIDGED PROSPECTUS.

This Company has been formed to acquire and work Mining Leases No. 265 and No. 442, containing together 27 acres, situate on Hannan's Hill about 30 miles north-east of Coolgardie, in the Yilgarn Gold Fields of Western Australia, between the Mount Charlotte and the Cassidy's Hill Gold Mines, as shown by the accompanying sketch plan. It includes the famous Hannan Reward Claim which constitutes one of the very few reward claims granted by the Government of the Colony.

It will be seen from the Reports and Plan that a large amount of development work has already been done, and that the company is a proved gold mine of great richness. Up to the receipt of the latest cable advices, the entire cost of development, in addition to the general working expenses, have been defrayed by the sale of gold obtained by hand picking. Samples of gold taken from the mines can be seen at the offices of the company.

Since the date of Mr. CORBOULD'S Report he has furnished the following further particulars:—

Extracts from letters received in London from Mr. Corbould:—

June 9th.—"We have connected Brownsword Shaft and Hannan Shaft. We are now starting to cross cut north from Brownsword Shaft so as to connect into cross cut from Wynne Shaft. The crosscut from Wynne Shaft has been extended 23 feet since plan was sent to London. On this plan there are two reefs between Hannan and Brownsword Shafts. They have junctioned above the drive, and below the junction they have split up into a lot of small veins, but in the bottom of the drive the veins of quartz are going down and I feel certain will make again at a lower level into a reef. We have started driving on the reef showing in the bottom of Hannan Shaft; the width of the reef is from 12 to 18 inches, carrying fair gold."

June 15th.—"We have just struck the reef in the cross cut between Wynne and Brownsword Shafts at 103 feet from Wynne Shaft. The gold in it is something great. I brought up about 70 lbs. weight of stone, and I calculate I have quite two ounces of gold from it. The reef appears 6 inches wide."

"The reef we are driving on from Hannan Shaft keeps from 12 to 18 inches wide, and continues to carry good gold. From one piece of stone this week I broke out a piece of gold which weighed 5 dwts."

June 30th.—"We have cut this morning the vertical reef in the crosscut 43 feet north of Brownsword Shaft. The reef is about 6 inches wide, showing a little coarse gold. In the bottom of the crosscut the reef is much richer. The crosscut has been driven 132 feet south from Wynne Shaft. We have to drive 80 feet further to connect the two. We shall then drive on the course of the reefs."

August 4.—"We have completed the crosscut from Wynne Shaft to Hannan Shaft, and have now splendid ventilation. I am now extending the crosscut from Hannan Shaft to our Southern boundary, and expect to cut one or two reefs before the distance is completed. We started last Tuesday to drive on the course of two of the reefs, and I think we can pick by hand enough coarse gold to pay all working expenses. I broke one stone yesterday and got a piece of gold in it weighing 2½ ounces. But before we can make this a paying mine we must get water or erect dry process machinery. I just want to prove the mine to be rich in gold by one or two month's work, and then I must sink for water."

August 10th.—"At the Government well, which is situated a mile east of Hannan's Hill, they have struck a large supply of water at 280 feet."

August 24th.—"If we can pay expenses by hand picking by three men, what can we do when machinery is erected? The stone as it comes up is roughly picked over by hand and the coarse gold picked out, the stone after picking assays from 3 to 5 ounces to the ton, and will lay at grass until such time as a mill is erected. For the month I have only had three men driving on the course of the reefs and the rest of the men doing dead work. All the ground broken in the mine is wheeled in barrows to the shafts and then hauled up by windlass (hand power). Now what could we do if we had machinery instead of working in such a primitive way. Get water and machinery and the mine will soon pay dividends on £70,000 capital."

"The gold we are getting now to pay the expenses with is coming from 70 feet and about 110 feet down. As far as I have been able to ascertain the gold is getting richer the further we go down."

September 7th.—"We have been able to reduce the rate of wages from £4 per week to £3 10s. per week for miners, and from £3 10s. to £3 for surface hands. Water is now selling 3d. per gallon, and provisions are all 30 per cent. cheaper than they were four months ago."

The Mine will be taken over free from any incumbrances or royalties, and subject only to the usual claim licenses from the Government.

Mr. W. H. Corbould has consented to act as Manager if desired by the Board at a salary of £500 per annum.

The purchase price payable by the Company is £48,000, payable £7,000 in cash, £30,000 in fully paid shares, and the balance in cash or fully paid shares, or partly in cash and partly in fully paid shares of the Company, at the option of the Company.

The Vendors are the Hannan's Hill Gold Mining Company (no liability), who will retain a large interest in the Company, and who have stipulated for a minimum working capital of £22,000, which sum the Directors have every reason to believe is ample for the purpose.

The only Contract entered into on behalf of the Company is a Contract dated 12th October, 1894, and made between the Vendors of the one part and Frederick Peel Baxter, as Trustee for the Company, of the other part. This Contract provides for the payment by the Vendors of all expenses of and incident to the promotion and formation of the Company up to and including allotment, exclusive of registration fees.

Copies of this Contract and of the Memorandum and Articles of Association, the original Reports and Plan of the property, may be inspected at the offices of the Company's Solicitors.

There are also other contracts to which the Company is not a party which may technically fall within Section 38 of the Companies' Acts, 1867. Subscribers will be held to have had notice thereof, and to have waived all rights to be supplied with particulars of such contracts, and to have agreed with the Company as trustees for the Directors and other persons liable not to make any claim whatsoever or to take any proceedings under the said section, or under the Directors' Liability Act of 1890, in respect of any non compliance with the said section or of any mis-statement in the prospectus made by the Directors in the *bona fide* belief that it is true.

Applications for shares should be made on the printed form and sent to the Bankers of the Company, together with a deposit of 2s. 6d. per Share.

In case there is no allotment of Shares the deposit will be returned in full:

Prospectuses and forms of application can be obtained at the Bankers, Brokers, Solicitors, and at the Offices of the Company.

London, 26th October, 1894.

C. PASS & SON (Limited), BRISTOL,
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MAKERS OF BEST RED LEAD FOR FLINT GLASS MANUFACTURERS,
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J. A. JONES, Mining Engineer,
(M.Inst.M.M., M.N.Eng.Inst.M.M.E.)
GIJON (ASTURIAS), SPAIN.

PACIFIC MINING AGENCY AND TRUST COMPANY.

A Corporation organised under the Laws of the State of California.
CAPITAL STOCK, £50,000.
BOARD.
IRWIN C. STUMP (Chairman), Manager of the Estate of the late U.S. Senator Hearst.
IRVING M. SCOTT, Manager Union Iron Works.
JACOB H. NEFF, President California Miners' Association.
P. N. LILIENTHAL, Manager Anglo-California Bank (Limited).
W. F. GOAD, Vice-President, Wells, Fargo, and Co.
D. M. BURNS, Capitalist.
R. C. CHAMBERS, Manager Ontario Mine, Utah.
WILLIAM C. RALSTON, Secretary (Secretary California Miners Association).
BANKERS—The ANGLO-CALIFORNIAN BANK (Limited).
HEAD OFFICE — MILLS BUILDING, SAN FRANCISCO, CAL.

THIS COMPANY sells Mines, Mining Claims, Ditch Properties, and Water Rights ON COMMISSION, and will act as Agent and Broker for the Sale and Purchase of such Properties.

It is intended to conduct the Purchase and Sale of Mining Claims, Ditch Properties, and Water Rights on the same basis as a real estate transaction.

The Company is prohibited by its Articles of Incorporation from buying or selling on its own behalf, or except upon commission, or as agent or factor for others.

The buyer pays no fees whatever, and there is no incentive to advance the price beyond the original figures at which the price and commission have been agreed upon with the seller.

It is not intended only to negotiate the sale of an entire property but interests in such may be sold or money obtained for development work.

This Company especially solicits the business of making reports or examinations for non-resident mine owners on any of their mines in the United States, and obtaining special information as to their condition and so forth (said reports being confidential).

Those who conduct the business of the Company have had long experience in mining operations, and it is their intention to place the Company in a position to inspire the confidence of all who seek its assistance in its integrity and fair dealing.

We respectfully refer to any Bank in the City of San Francisco and to the Anglo-Californian Bank (Limited), London, as to the standing of the Board of Directors of this Company.

Descriptions of properties for sale with maps, reports and all necessary information, are left on file in the office of the Company. Abstracts of such reports with prices of mines will be furnished pon application.

California has produced £267,000,000 in gold, and is still producing £2,680,000 a year. There are thousands of claims requiring capital for development. In other Pacific Coast States and Territories there are abundant opportunities for investment in mines of gold, silver, copper, lead, coal, and so forth. Information concerning these will be furnished by this Company on application.

This Company will also furnish competent engineers, superintendents, foremen, miners, millmen, assayers and others connected with the mining industry on application, furnishing their references and so forth.—Cable Address, "CHAPIN," San Francisco.

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Telephone: No, 45 (Post Office and National).
Telegrams: Gething, Cardiff.

WAGONS.—New to Latest Regulations, 50 with one end two Side and two Bottom Doors, Wheels with WROUGHT Bosses, large capacity (12 inches longer and 4 inches deeper than usual), ready for Lettering. New to Latest Regulations, one end and two side doors, sides and ends 3 inch red deals, all inside underframe timbers of English oak; delivery, about 15 per week, commencing forthwith. 50 End Tip 10-ton Coal Wagons to New Regulations, equal to new, prompt delivery.

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EARTH WAGONS.—75 side tipping 30-inch gauge, STEEL wheels and STEEL axles, £5 each, f.o.t. Cardiff.

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We are prepared to Compose, Stereotype, and Print Papers, Pamphlets, &c., in the most expeditious manner, and give Special Attention to Printing required on the formation of New Companies, including:

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ANNUAL REPORTS, BALANCE-SHEETS,
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ESTIMATES FREE.

"THE MINING JOURNAL,"
18, FINCH LANE, LONDON, E.C.

The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

An Illustrated Record of Mining, Metallurgical, Railway, Financial, Industrial, and Engineering Progress.

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ALL OVER THE WORLD,

Amongst Mine Owners, Capitalists, Investors, Mining, Metallurgical, Railway and Mechanical Engineers, Railway Administrators, Manufacturers, &c., &c.

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TO SUBSCRIBERS.—The Annual Subscription to THE MINING JOURNAL, including postage to any part of the United Kingdom, is £1 4s. Abroad, £1 8s. payable half-yearly in advance. It can be purchased at all Railway Bookstalls and Newsagents throughout the United Kingdom for 6d.

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Displayed (Trade) Advertisements of 2 inches in depth (or more), Single Column measure, will be inserted at the following rates:—For 52 insertions 2s. 6d. per insertion for each inch in depth; for 26 insertions 3s. per insertion for each inch in depth; for 13 insertions 3s. 6d. per insertion for each inch in depth. Terms for special positions and contracts may be had on application.

*** ADVERTISEMENTS (which should in all cases be sent direct to THE MANAGER) can now be received for the forthcoming issue of THE MINING JOURNAL, RAILWAY AND COMMERCIAL GAZETTE, on FRIDAY, at 18, FINCH LANE, E.C., up till 6 p.m., and at 3, DORSET BUILDINGS, SALISBURY SQUARE, E.C., until 9 p.m.

*** THE MINING JOURNAL, is neither controlled, nor is any interest in it held or exercised, by any mine owner, speculator or syndicate, and it is in no way connected with any share dealing agency. The position occupied and the views expressed by it are alike absolutely independent.

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LONDON: OCTOBER 27, 1894.

GOLD MILLS.

IN continuation of our remarks last week, our readers will remember that the ores containing gold are seldom so rich that they can be dispatched direct from the mine to the smelters, and, consequently, as soon as an auriferous lode has been discovered and developed to some extent, it becomes necessary to purchase and erect machinery for the milling of the ore. We are aware, of course, that at some mines, as for instance those around Black Hawk City, in Gilpin County, Colorado, a large proportion of the ore is sent direct to the smelters in Denver, the remainder being treated in the local customs mills, where a proportion of the gold contents are recovered on the plates, and the remainder by concentration on bump tables. If we remember rightly, the production of one mine—the Belmont—was $93,000, and of this the ore sent to the smelters produced 80 per cent., the mills by amalgamation 15 per cent., and the concentrates 5 per cent. With ore of such a character it would be possible to run a mine without erecting a mill, but as a general rule it may be taken that a gold mine necessitates a gold mill. The tendency is to hurry on the erection of a stamp battery long before the mine is in a position to keep the machinery in full work, while it often happens that after the mill is erected the ore is found to be not worth treating, or the machinery to be of the wrong type for the treatment of the ore, so that either the undertaking has to be abandoned or fresh capital is required to purchase and erect new machinery.

We have so often pointed out in these columns the wisdom of having the ore thoroughly tested not only from a mining point of view as to the quantity available, but also from a milling standpoint as to the best machinery for crushing and treating it, that we almost hesitate to insist anew upon the preliminary precautions. And yet they are all important; and presumably, because of their importance, are again and again overlooked. In the case of gold milling, it is easier to move cautiously and gradually than in that of coarse concentration, as small prospecting mills can be obtained, weighing with engine, boiler, stamps, framework and plates, all complete, less than 6000 lbs., and costing not more than £140, or thereabouts. With such a mill with three stamps of 200 lbs. each, capable of crushing from 3 to 4 tons a day, the most valuable information could be obtained, which would either prevent the expenditure of large sums in the erection of permanent machinery, or if the mine warranted that outlay would provide data upon which the permanent machinery could be designed. If a more elaborate plant than the prospecting mill just described is required, then a small 5 stamp battery with a BLAKE crusher feeder and semi-portable engine is the next step upwards. The stamps can, in many cases, be replaced by a HUNTINGTON mill which, with certain classes of ore, gives excellent results, and such a plant would be capable of milling from 10 to 12 tons per day or more, according to the nature of the ore. The addition of a couple of vanners or other form of fine concentrator to the above-named plant would make a very efficient little mill for a small mine or the commencement of a large one. The whole would be housed in with corrugated iron supported on a wooden framework, and would require a motive power of from 15 to 20 horse. Leaving now the question of a prospecting or temporary mill used during the initial stages of a gold mine, we will next consider what may be termed a type of permanent mill, and at the outset are met with the difficulty of deciding upon the number of stamps to be used. It is evident that this depends upon the output of the mine, the extent to which it is proposed to push the development, and the funds in hand for the purchase and erection of the machinery, and these questions can only be decided by a study of each individual mine, and the resources at the disposal of the directors or owners.

The smallest permanent mill which could be erected would not contain less than 10 stamps, capable of crushing 15 to 20 tons of ore per 24 hours; and if the engine and boiler power and the main driving shaft of such a mill are made of sufficient strength in the first instance, such a mill could be built as would admit of the addition of 10 additional stamps when necessity arose, without involving the stoppage of the original machinery. Taking, however, a 10 stamp mill as the smallest of the permanent class, we will first consider it, and then describe one with 100 stamps recently erected in the Transvaal. The machinery in a 10 stamp wet crushing gold mill would consist of a No. 2 BLAKE crusher with jaws 10 inches by 7 inches, a grizzly or ore screen 3 feet by 10 feet, two automatic ore feeders, 10 stamps of 850 lbs. each in one battery, including all ironwork, wooden pulley, and hard wood guides for stamp stems. A set of water pipes, two copper table plates 54 inches by 8 feet by ⅛ inch thick pure copper, and free from flaws. Four copper lining plates for mortars $\frac{3}{16}$ inch thick of same quality. Four vanner concentrators of the LUHRIG, FRUE, or WESTBURY type, one grinding pan, one settler, three counter-shafts, one amalgam retort and condenser, all necessary belting, and motive power of from 30 to 35 horse power.

The question of water, steam, or electric power for driving the mill is one which circumstances only can decide, and is one about which we propose to write on a future occasion. The number of men required to work a small mill is, in proportion, greater than that necessary for a large one, so that practically the same hands are wanted in a 20 stamp mill with concentrators running night and day as in a 40 stamp. They will consist of one man at the rock breaker working 10 hours, and crushing in that time enough material to keep the rest of the mill going for 24, provided that the ore bins have been designed of sufficient storage capacity to hold the broken ore, two amalgamators working 12 hours each, whose duties will consist in attending to the batteries and plates, and keeping them in running order, two concentrator men, one for day and one for night, to look after the vanners, and one labourer to do odd jobs and lend a hand where needed, making a total of six men for the mill. The mine manager will take the general supervision of the whole, and also attend to the assaying, retorting and melting of the gold, as well as the book-keeping and such office work as may be necessary.

A 10 stamp mill is after all but a small concern when compared with the big South African or American mills, where upwards of 100 stamps are running night and day, and as an example of a 100 stamp mill, we will take that recently erected at the New Primrose Mine in the Germiston district, about seven miles east of the town of Johannesburg. The ore carries an average of 9 dwts. of gold to the ton, and the total amount crushed up to date amounts to 394,423 tons. The crushing is done by means of two BLAKE-MARSDEN rock breakers, one 8 inches by 12 inches, and the other 10 inches by 15 inches, and it is now proposed to erect a No. 5 GATES crusher in addition. The crushers are driven separately by a Globe compound engine, and the ore is then trammed to the top floor of the battery-house, and tipped into large bins placed between the rows of stamps, of which there are 50 head on either side, placed back to back with the bins between them. The one row of 50 stamps weighs 750 lbs. per head, and the other row has heavier heads of 950 lbs. each, the drops varying from 7½ inches to 9 inches. Each set of five stamps is driven separately, and the screens are of 900 mesh. The pulp or finely crushed ore flowing from the screens passes

over amalgamated copper plates, each of which for every battery of five stamps measures 10 feet long by 5 feet wide, while mercury is also introduced into the battery by hand, with the object of catching the particles of gold immediately they are freed by crushing from the rock or gangue. The water necessary to form the pulp flows into the stamp boxes at the rate of 1000 gallons for every ton of rock crushed. The tailings from the plates flow over blanket sluices, and are finally treated by the cyanide process. With ore containing from 15 dwts. to 1 ounce of gold per ton, 1½ dwts. would be collected in the boxes, 8½ dwts. on the plates, thus leaving from 5 to 10 dwts. in the tailings, and of this amount 70 per cent. would be recovered in the cyanide works.

The motive power for the stamps is supplied by a Tangye tandem compound surface condensing engine with cylinders 17 inches and 29 inches diameter, and 36 inch stroke, running at a speed of 75 revolutions per minute, and indicating 200 horse power. The fly wheel, which is also the driving wheel, is 16 feet diameter, and communicates its power to the battery shafts by rope gear. The mill is illuminated by the electric light, the dynamo being of the ELWELL-PARKER type, and driven by a Tangye engine, which was formerly used for driving the mill before it attained its present dimensions. The boilers supplying the steam for the engines at the mill and mines are of the BABCOCK-WILCOX type, and of these there are three, each of 106 horse power. It will be noticed that in this mill no concentrators are used, but that the whole of the tailings are treated by the cyanide process. The new cyanide works at this mill have just been erected at a cost of £12,000, and are capable of treating 15,000 tons per month, the cost per ton of tailings treated being only 5s. The order and regularity which characterise the modern gold mill, with its well-kept machinery and general air of prosperity, is a great contrast to the slovenliness and dirt which we could mention in connection with certain old-fashioned mills, built and run on the rule of thumb principle, with the natural result that only a small percentage of the gold contained in the ore was saved, while the workers in the river below the mill became rich on the gold left in the tailings. The education of men for the post of managers is now, however, becoming more and more perfect, thanks to the various mining schools, so that we less rarely find a mine committed to the charge of a thoroughly incompetent man, and consequently may expect a higher percentage of good results from gold mining and milling than formerly. We have not in this article dwelt upon the cost of the milling operations in various parts of the world, but will, in all probability, take up this subject later on.

NOTES AND COMMENTS.

THERE appears to be no abatement in the number of Western Australian companies offered to the public for subscription. Promoters seem thoroughly imbued with the sentiment expressed by Shakespeare that "there is a tide in the affairs of men, which taken at the flood leads on to fortune." They are certainly "flooding" us with properties of one description or another, and while a great number of speculators and investors will some day find themselves ruinously engulfed, these wary individuals are sailing on to immense fortunes. The past week, perhaps, has been a less exciting one than those immediately preceding it, but it is only a lull in the storm. The prospectus of the Jacoletti Gold Mine has been pretty extensively advertised, and we are afraid that it, too, has been as successful as many another that has preceded it. We notice that the amount to be reserved for working capital is only £20,000, whilst £65,000 is to be paid, partly in cash and partly in shares, to the vendor for a property of 24 acres! Half of this, we are informed, *is known as Jacoletti*, and upon this section Mr. Mellor has tried to make out a favourable report. What about the other 12 acres, respecting which nothing appears in the advertised prospectus? It will interest us to watch how this property will turn out in the future. In this connection we might state that at last the Golden Link has gone to allotment.

AT the present moment, the expressions of opinion of any man who has actually been to Coolgardie, and who possesses sufficient knowledge to form a judgment upon its wealth and permanence, will be eagerly welcomed and attentively listened to. For instance, Mr. C. A. Ring, a gentleman well known in Australia as a leading sharebroker, has lately returned from the district which is exciting so much attention, and has delivered himself of his views to the reporter of the *Adelaide Observer* Speaking as to the permanency of the field, which, of course, is of the most vital concern, he thinks that one of the best indications of this is the fact that rich gold has been struck at 253 feet in Bayley's Mine. What he considers to be good and highly payable mines along the road were Cosgrove's, the Golden Bar, Tindal's and Burbank's, and the the Londonderry. The latter, Wealth of Nations, Bayley's, and Tindal's, rank as the foremost on the field. The mine he likes best at Hannans is the Ivanhoe, which he declares to be a good payable property. At the White Feather the principal mine is McAuliffe's, which, he says, has a strong reef running right through the length of the property. A small two head of stamps erected on the ground and worked by hand crushed enough gold to pay expenses. Adjoining this is the Golden Eagle, which is a continuation of the same reef. Shafts have been sunk as deep as 80 feet, showing gold bearing reef.

ADJOINING this on the south is Bissenberger's, who have four blocks, the same reef traversing the property throughout. When he was there the shaft was down 130 feet, with gold showing in the stone. Mr. Ring estimates the stone in this mine to average 2 ounces. Other claims in the district which were looking well were Meikeljohn's, Kanowna, Nemesis, and Nemesis Extended. These were producing a fair amount of gold, whilst several other properties had good prospects. This district, he considers, to be one of the most important of Coolgardie fields, owing to the strong and permanent reefs. Mr. Ring anticipates that in the district where the Londonderry was discovered, further rich discoveries will be made as developments take place. Then, as to water—which probably is the cause of the most anxiety—Mr. Ring confessed that it was a drawback to the field, but, at the same time, he has no doubt that as depth is attained sufficient will be found for all machinery purposes. The Government, he says, have made good provision for conserving water by the construction of dams. In a word, he considers the field will be a permanent one both as regards reef and alluvial gold.

SPEAKING of water, the opinion of Mr. J. L. Sherlaw, an expert who has just come from Coolgardie—an interview with whom we published last week—is somewhat confident, but, nevertheless, may tend to reassure many who are anxious on this subject. He states that the year before last there was a considerable rainfall, and also a fairly good downpour last year. This, he argues, should prove amply sufficient, and collecting, as it has done, in true fissures, it should supply enough to last the present generation. Besides being novel, this is a highly optimistic view—in fact, we are afraid, too much so. Nevertheless, if we modify it somewhat, according to the way in which he looks at it, there must be a pretty good quantity. He assures us likewise that the Government are very energetic in constructing dams, of which there are a great number all over the field. Now it is on this question of water that we have to deal with the most conflicting testimony. We must confess that the balance of opinion is on the side of its extreme scarcity. For instance, here is the *Miner's Right*—a paper whose tone greatly pleases us—lamenting the fact that "there has not been enough rain to even moisten the bottom of most of the tanks which our paternal Government has provided at so great an expense. And the supply is diminishing. This being the case, the outlook is discouraging in the extreme." In the face of this what must we believe? We are simply bewildered by the conflicting evidence that is offered us. One fact, however, is clear, and that is it does not in the least deter the public from eagerly subscribing to new Coolgardie companies.

IT is not many months ago since we announced the departure to Western Australia of Mr. Samuel Gifford, who was despatched by the directors of the Australasian Mining Company (Limited) (formerly the Gympie Great Eastern Gold Mining Company), to seek for a property for this concern. We learn from the report of the directors, published this week, that though he has made an exhaustive examination of the Coolgardie district, he is unable to recommend any of the properties offered. This will come as a surprise to a great many, for one would naturally infer, seeing the unceasing number of West Australian companies floated, that this district would be a happy hunting ground for companies seeking properties. To say the least, it is very singular, and as Mr. Gifford is a mining engineer of great experience, and is a representative of the firm of Messrs. John Taylor and Sons, it is a circumstance which should make us pause. It may be, of course, that the best and richest claims are all taken up, and their destinations fixed, but this can hardly minimise the significance of the fact that he was not offered one worthy of recommendation. This should come as a warning to the public who are so eager to subscribe to new West Australian concerns, and should influence them in examining with greater minuteness the prospectuses with which they are at present overwhelmed, for we may rest perfectly contented that many of the properties offered to Mr. Gifford will be thought good enough for the "fleecing" of the unwary investor.

As a consequence of Mr. Gifford's want of success in Western Australia, the attention of the directors has been turned to that other promising colony—Victoria. Here has been found a property "whose surface indications are of a very promising character." He acquired the option to purchase it upon "reasonable terms," and time was given to enable certain trials to be made, in order to prove the value of the lode in depth. This option expires on the 31st inst., and the directors are in expectation of receiving a cablegram prior to that date as to the results obtained, enabling them to judge whether or not it will be advisable to exercise the option of purchase. In the meanwhile, the local directors at Gympie have secured the option to purchase "what appears to be an extremely promising property," situated in the Gold Field of Gympie, a property which they strongly recommend the company to purchase. As a result of this, cable negotiations have been going on between the London and local boards, which, in our opinion, are greatly in favour of this property, and which, no doubt, will successfully prevail with the shareholders to purchase it.

IN replying to the criticisms passed upon his "Notes on Persian Mining" at last week's meeting of the Institution of Mining and Metallurgy, Mr. Mactear entered more largely than in the body of his paper into generalisation. The pith of the results of his wanderings in the Empire was conveyed in one sentence, wherein he deplored the absence of controlling centres and of any mode of transport that did not shock the reason, as the two great obstacles in the way of developing the undoubtedly valuable mineral deposits existing in Persia. Eastern mules have been made the subjects of panygeric such as more than compensates the species for the insults heaped upon their European brethren by such adjectives as "mulish," and the proverbial comparison in which the patient animal figures as the long-eared embodiment of stubbornness, but as a means of transport they are too deliberate of movement and costly of keep to successfully compete against the luggage train of civilisation. The overwhelming disadvantage thrown upon the mining industry by the tardiness of the caravan system of transit needs no elaboration. Its rates are simply prohibitive of exportation in cases where the ores are not of surpassing richness; and until the Shah conforms sufficiently to Western civilisation to countenance the construction of an efficient railway system, or until the uses of metal in the country itself are multiplied, Persian mining must remain rather in the domain of possibility than in that of actuality.

THAT there are valuable minerals in the Empire would seem to be beyond question. Analogical reasoning forbids us to believe that this country of all others should have received no benefits from the general distribution of minerals. Direct experience, moreover, has established the existence of coal, lead, copper and iron, quicksilver and gold—all these at various times have been unearthed. Petroleum, too, has been found in sufficient quantities to fully justify further exploration. There is also the strong force of geological evidence in favour of rich deposits of minerals in the northern parts of Persia, closely adjacent to the Russian territory. Plentiful stores of mineral wealth are being profitably worked in the Russian Caucasus, and their continuation in Persian territory has almost the force of certainty, seeing that there is little, if any, variation of territory. But here the full force of the transport difficulty is felt. Russia, with that charming spirit of bureaucratic exclusiveness distinguishing her Government, flatly refuses to allow the minerals to be drafted through her borders. The only alternative, then, lies between Turkey, and a long tedious journey by mule caravan southward to Bagdad. The almost insuperable difficulties cast thus upon the mining industry in the Shah's dominions hardly need emphasis.

SPEAKING on Monday at the Cape in his capacity as Chairman of the De Beers Consolidated Mines of Kimberley, Mr. Cecil Rhodes set the value of the diamonds produced during the past year at £2,820,000. Split into its component parts of expenditure and profit, a sum of barely a million and a quarter was available for distribution. A loss of half a million was occasioned by the fall in the value of the diamonds; but in this connection the speaker anticipated at least a larger measure of prosperity, though a return to the prices of former days could hardly be anticipated. In the course of his speech Mr. Rhodes took occasion to animadvert upon the policy of the American Government in setting a big duty upon diamonds. While the speaker's convictions were strongly in favour of Free Trade, a necessary provision for the ensurance of this was reciprocity; in short, if we were to shut Brother Jonathan's new products out, we should shortly bring him to his senses. Something of the same doctrine, expressed from some high political quarter in England, was not at all favourably received, and some courage is required for the public formulation of an opinion which makes Free Trade to rest rather upon a conditional than an absolute basis. Mr. Cecil Rhodes, however, is just the man to give full and candid expression to a view of this sort, and it is largely upon that account that his speeches are anticipated with so much pleasure in unprejudiced quarters.

THE reconstruction of the Van Ryn Gold Mines Estates has been happily carried through, and the management are proceeding vigorously to work, in the hope of putting the company upon a dividend-paying basis. When so candid a critic as Major Cotton expresses himself in sanguine terms as to the future of their property, the shareholders have indeed the right to anticipate a successful career, and upon that ground, at least, the patience with which the company have waited the issue would seem to be in a fair way of receiving its reward. The concern starts upon its new path very auspiciously. The ordinary liabilities of working apart, the company is free from debt, and there is a balance of capital to credit, which should enable the management to be put upon a sound and secure foundation. The cyanide plant has given excellent results. Some of the assays reported from the mines are at a very high figure, and if they represent anything like the average value of the ores large profits will inevitably be made. Steps are being taken to put the neighbouring mines belonging to the company into working order, so that the directors will have more than one string to the bow. The company is fortunate in possessing a local committee of practical men, who can direct their affairs on the spot. This—the great want of many mining companies—should at least ensure that the best possible account should be given of the capabilities of the mines.

THE *Correio da Beira* has been putting in a good word for the Mozambique Company. It understands that "numerous prospectors have applied for licences to examine the Barue district in view of the recently-discovered gold formations, being, no doubt, attracted by the fertility of this magnificent country—Gorongoza. Several crops have been experimented on in this neighbourhood with good results, and we believe that an important development will take place this year in agriculture. The soil is admirably adapted to this purpose, being most fertile." It then goes on to speak in eulogistic terms of the Manica Gold Fields, which, at the present time, are attracting so much attention. It remarks that "anyone taking an impartial view of the condition of the Manica Gold Fields will come to the conclusion that as yet they have not been fairly tested. As to their not being of a payable character, that is beyond dispute; but people ask Why is there no output? The answer is simple. In nine out of ten cases the ground is lying idle, and is in the hands of down-country and home syndicates, who do not intend to do any work, or their representatives are of the wrong kind to look after the interests of their shareholders. There have been large sums of money subscribed for the development of the mines of this district. But where are they? In all supposition, they have gone where the woodbine twineth, for we have not seen them here. Local syndicates have been established, and are working on a good, sound basis."

ANOTHER coal strike of considerable magnitude has come to a conclusion which, so far as the men are concerned, can only be described as a complete failure. The defection of large numbers of men in Lanarkshire and Ayrshire dealt a severe blow at the strike organisation. In conjunction with the maintenance of a firm attitude on the part of the men this break in the ranks made an undertaking in any case hopeless, more hopeless still. A disposition to look ahead and count the results of the strike manifested itself immediately afterwards in the Eastern counties. The tone of the speeches was not at all inspiriting from the point of view of the men. "Fierce picketings" and "strong measures," the terms in which labour orators are wont delicately to refer to the manœuvres of a few hundreds of men armed with bludgeons, were avowed to be almost unsusceptible, under the existing circumstances, of a successful application, and a hope was expressed—implying in its terms a consciousness that the strike was nearly at an end—that upon the return to work the men would not be subjected to the consequences of ill feeling on the part of the masters. Now that the strike is over the men can hardly be said to have gained anything. A good deal of the work they would have done had they remained in harness has been transferred elsewhere, and there is consequently a large proportion of the strikers who have not been able to return to their old quarters.

OUR CITY ARTICLE.

FRIDAY EVENING.

THE MINING MARKET.

A fair opening.—Chartered and Bechs. weak.—A satisfactory settlement.—Subsequent rally all round.—Markets buoyant at the close.

THE leading feature of this week's markets has been the sharp rally in all classes of shares following upon a satisfactory settlement. A better condition of affairs prevailed at the beginning of the week. South Africans—land shares apart—were buoyant, a hopeful set of indications auguring well for the new account. Jumpers and Wolhuters led the downward movement, a weakness affecting them upon the withdrawal of support. Improvements, on the other hand, fully counterbalanced the losses. A fair number of gold shares, and the leading members of the Diamond group, hardened considerably. West Australians shared in the more hopeful tone of business, the recent relapse being followed by an accession of strength. Indians, too, appeared in a fair way to recover from the dulness which has so long affected them. The markets were in a distinctly favourable condition on Tuesday, the day preceding the carry-over. South Africans were lively and buoyant, and the rises much more than counterbalanced the falls. This applies in full force to the whole of the gold shares; but the Land and Diamond sections, some few exceptions apart, were rather duller. Chartered lost a few pence, and Jagers. and De Beers moved down to some small extent. Miscellaneous shares manifested a fair undercurrent, but the state of affairs there differed widely from that of the past weeks. Indians lost something of their strength, while the other sections of the Miscellaneous market were similarly affected. Wednesday's carry-over was of fair extent, and proceeded smoothly and satisfactorily. The contango rates ruling were rather stronger than usual. When the transactions were in a fair way towards completion buying for the new account recommenced vigorously, a hopeful characteristic being communicated to the operations by the fact that in the last fortnight the falls were outnumbered by the rises in the proportion of two to one. In the South African section great strength was manifested by particular shares, in many cases the rises being of considerable importance. West Australian shares were fairly lively, and the rates ruled pretty stiff. For the most part the Indian shares had improved in tone. Thursday was marked by a distinct improvement in South African shares, the favourable after influences of the carry-over becoming apparent. Several sensational rises occurred in the Kaffir market, a back ground being formed by an upward movement shared in by all classes. Land and Diamond shares recovered wholly from their temporary weakness. West Australians, too, were rather firmer, the principal feature being a recovery in Great Boulder.

British Mines.

There is no improvement to record in the Cornish market. There is really very little actual business doing, and until tin moves it is useless to look for any activity. Still, when the time comes, the probability is that it will not be an easy matter to secure many shares at the low prices now ruling.—Risen: None. Fallen: Carn Brea, 10s.; Cook's Kitchen, 2s. 6d.; Dolcoath, 40s.; East Pool, 20s.; Killifreth, 5s.; South Crofty, 10s.; South Frances, 2s. 6d.; Tincroft, 10s.; West Frances, 2s. 6d.; Wheal Agar, 5s.; Wheal Grenville, 10s.; and Wheal Kitty, 2s. 6d.

South African Shares.

Bearing in mind the next approach of the settlement, the South African market was distinguished on Monday by an amount of activity auguring well for the business of the next account. With the exception of Land shares, in which department Chartered and Bechs. relapsed to some extent, the whole market was well supported, the rises being neither few nor unimportant. Rand Mines recovered to 14⅞ buyers, and small advances occurred in Aurora, Crown Reef, May, Modderfontein, Princess, Randfontein, and Roodepoort Deep. Jumpers went back to 5⅛, Meyer and Charlton to 6¼, Wolhuter to 3¼, and there were declines in Aurora West, Van Ryn, Champ d'Or Deep, Durban-Roodepoort, Knight's and Main Reef. Sutherland Reef improved to 12s. 9d., upon a highly favourable report from the other side as to the development of the mine. Chartered relapsed 7½d. to 34s. 10½d., while Bechs. lost to the extent of 1s. De Beers and Jagers. were strongly supported, the former rising to 17⅛ and the latter to 15. Tuesday, the day before the carry-over, was distinguished in this market by considerable firmness, and while the changes of price were not many, the rises were greater in number than the falls. There were considerable enquiries for Modderfontein, which sent the price up 5-32 to 3⅜. Gold Fields Deep were quoted at 1¾—a rise of 1/16. New Primrose were firm at 4⅜ buyers. Village Main Reef recovered 1/16 to 4 1/16, and City and Suburban, Durban-Roodepoort, Kleinfontein, Meyer and Charlton, Stanhope, Consolidated Deep Level, Robinson, and Van Ryn were all higher in price than on the preceding day. On the other hand Salisbury experienced a set-back which depressed them to 2⅛, while Crown Reef, George Goch, May Consolidated, and Metropolitan were all rather easier. East Rand, Glencairn, and Spitzkop were at her better in tone. Land shares continued in a gloomy state. Chartered lost 4½d. to 34s. 4½d., and Consolidated Gold Fields were 1/16 worse. De Beers and Jagers. were slightly off colour. A satisfactory carry-over was experienced in this section of the market on Wednesday. The record for the past fortnight was a distinctly good one. Rises were much more numerous than falls, principal amongst the former being Rand Mines, to the extent of 1⅞, Modders 1 3/16, Jagers. ⅝, De Beers 3/16, Simmers ⅝, Van Ryns 1/16, Wolhuters ⅜. Business for the new account was briskly conducted. Glencairns were largely in demand, and rose 3s. to 43s. 6d., while Kleinfonteins went up to 2⅛. Meyer and Charlton and Rietfontein also came in for large improvements, while smaller rises were registered for Rand Mines, City and Suburban, Jubilee, Jumpers, Langlaagte Royal, Nigel, Robinson, May, Salisbury, Sheba, and Simmer. Mr. Rhodes' speech at the Cape upon the diamond trade did not exert a favourable influence upon De Beers, which lost 1/16. Jagers, on the contrary, remained firm. Chartered closed only 3d. lower on the day at 34s. 3d. Consolidated Gold Fields hardened and closed 1/16 up at 21-32. Oceana rose to the same extent, but Exploring lost 1/16. Thursday witnessed a strong revival in the shares of this market. Some of the rises were of an extraordinary character. Rand mines rose 20s. higher to 15½, while Simmer and Jack gained 7/16 to 8 1/16. Ferreiras advanced to 10⅛, Chimes to 2 3/16, Champ d'Or to 2 13/16, Heriot to 5 5/16, Henry Nourse to 3 7/16, Nigel to 3⅝, Modderfontein to 3 11/16, Van Ryn to over 2 11/16, Wemmer to 5, Kleinfontein to 2 11/16, Langlaagte Royal 3⅛, and Geldenhuis Main Reef to 18s. 6d. Transvaal Gold hardened to 2⅛, and Sutherland Reef remained firm, and closed at 16s. Both the diamond shares recovered from their recent depression, De Beers to 17⅜ and Jagers. to 15 5/16. Lands, too, were favourably affected, both Chartered and Bechs. improving.

South African shares have been steady during to-day, and close well. The feature has been a run on Glencairns, which were up to 47s. bid. Sutherland Reefs have fluctuated considerably. At one time they were quoted at 16s., and again at 14s., eventually closing at 14s. 9d. Harmony Preference shares were strongly in demand, and rose to 13s. 6d. Beyond this there has been little of note to chronicle.

Risen:—Aurora, 6d.; Aurora West, 1s. 6d.; Bechuanaland, 2s.; Bantjes, 1s.; Booysen, 6s.; Champ d'Or, 1s. 3d.; Chartered, 1s.; Consolidated Gold Fields, 1s. 3d.; Consolidated Deep, 5s.; East Randfontein, 3s. 6d.; Exploring, 2s. 6d.; Geldenhuis Deep, 2s. 6d.; Geldenhuis Main, 3s.; Glencairn, 5s. 6d.; Gold Fields Deep, 3s. 9d.; Henry Nourse, 2s. 6d.; Johannesburg Investment, 3s. 6d.; Joe's Reef, 6d.; Johannesburg Pioneer, 2s. 6d.; Jubilee, 7s. 6d.; Kleinfontein, 8s. 9d.; Klerksdorp, 9d.; Langlaagte, 3s. 6d.; Langlaagte Royal, 1s. 3d.; Lisbon, 6d.; May, 1s. 3d.; Metropolitan, 3s. 9d.; Modderfontein, 12s. 6d.; New Chimes, 3s. 9d.; New Jagersfontein, 2s. 6d.; New Primrose, 2s. 6d.; New Virginia, 3d.; Nigel (allowing for dividend), 8s.; Paarl, 6d.; Oceana, 1s. 3d.; Potchefstroom, 1s.; Rand Mines, 35s.; Rietfontein, 2s. 6d.; Roodepoort Kimberley, 1s.; South Africa Gold Trust, 2s. 6d.; South African Trust and Finance, 6d.; Salisbury, 5s.; Sutherland Reef, 3s. 6d.; Transvaal Exploration, 1s. 3d.; Transvaal Land (fully paid), 6d.; Village, 5s.; Witwatersrandt (Knight's), 1s.—Fallen: African Gold Recovery, 12s. 6d.; Alexandra Estate, 6d.; Crown, 7s. 6d., Grahamstown. 6d.; Heriot (allowing for dividend), 5s. 6d.; Jumpers, 5s.; Johannesburg Water, 1s. 6d.; Luipaards, 6d.; Moodies, 6d; Mozambique, 1s. 3d.; Ophir, 3d.; Otto's, 3d.; President Land, 6d.; Princess Estate, 1s. 3d.; Randfontein, 6d.; Reads, 2s. 6d.; Spitzkon, 1s.; Transvaal Estate, 6d.; Transvaal Land (15s. paid), 1s.; United Roodepoort, 2s. 6d.; Wemmer, 2s. 6d.

Miscellaneous Shares.

West Australian shares were distinctly better in tone at the commencement of the week. Bayley's Reward rose 1s. to 21s. 9d., and Hampton Lands 1/16 to 3 3/16, the Plains being also at 30s. 7½d. Consolidated Gold Mines, on the contrary, were very quiet, and the price was marked down to ½. The strongest feature of the section was West Australian Gold Fields, which went up 3-32 to 3 3/16. A rise of 1s. carried West Australian mining to 9s. 7½d. A highly improved state of things ruled for Indians, where the rises were general. Mysore Gold Fields were 1s. higher at 19s., an improvement of ⅛ carried Champion Reef to 3⅜, and small rises also took place in Ooregum Ordinary, Mysore Reefs and Nine Reefs. Among Miscellaneous descriptions, Broken Hill Proprietary, Aladdin and Wentworth Priority were easier. West Australian shares were on Tuesday fairly lively, but the strength of past weeks no longer characterised them. West Australian Gold Fields kept steady at 3 5-32. West Australian Exploration fell ⅛ to 1 1/16, Mawson's Reward lost ⅛ at 1⅛, and Hampton Lands were depressed to 3⅛. Blackett's Claim lost ⅛ to ¾ sellers, Bayley's Reward lost 6d. at 21s. 3d., and Australian Mining were easier at 9s. In other directions of the Miscellaneous market Indian shares had lost something of their recent strength, while Broken Hills, New Queen, and Macate were rather worse. Business for the new account was of moderate extent in the West Australian section on Wednesday. Gold Fields were strong at 3 3/16, but Concessions, Explorations, and Bayley's were lower, and Boulders were much easier, receding to ⅝ discount. West Australian Mining continued active, operations being done at 9s. 9d. The strongest, spot in the Miscellaneous department was the Indian section where Mysores, Wynaads, Nine Reefs, and Colars were better, but Ooregums and Mysore West lower. Gustons reacted to ⅞. Australasian and Brilliant and St. George were dealt in at rather higher values. Miscellaneous shares were in a much better state after the carry-over. Most of the West Australian shares hardened, the chief feature being Great Boulder, which recovered rapidly. Among the others which improved were Gold Fields, Concessions, Hampton Lands and Plains.

Risen:—Aladdin, 2s. 6d.; Alamillos, 2s. 6d.; Argentine Concession, 6d.; Brilliant, 1s. 6d.; Champion Reef, 1s. 3d.; Day Dawn P.C., 1s. 6d.; Kapanga, 1s.; Macate, 6d.; Mason, 2s. 6d.; Mysore, 1s 3d.; Mysore Harnhalli, 3d.; Mysore Wynaad, 6d.; New Guston, 3s. 9d.; Richmond, 1s. 3d.; Rio Tinto, 15s.; Tharsis, 5s.; Victory, 1s. 6d.—Fallen: Brilliant St. George, 1s.; Broken Hill Proprietary, 2s.; Burma Ruby, 1s.; Colombian Hydraulic, 1s.; Copiapo, 2s. 6d.; Golden Feather, 6d.; Golden Leaf, 6d.; Gold Fields of Mysore, 1s.; Kempinkote, 6d.; Mill's Day Dawn, 1s. 3d.; Montana, 1s.; Mysore West, 6d.; Nine Reefs, 3d.; Nine Reefs (fully paid), 3d.; Ooregum Pref., 2s. 6d.; Pestarena, 3d.; Poorman, 3d.; Waihi, 3s. 9d.

Australian shares have been fairly firm throughout to-day. Hampton Lands have been flat, while Great Boulders have vacillated a good deal. Elsewhere in the Miscellaneous Market there have been no special features.

Risen:—West Australian Exploration, 1s. 3d.; West Australian Gold Fields, 2s. 6d.; West Australian Gold Mining, 2s.—Fallen: Australian, 1s. 3d.; Bayley's, 6d.; Blackett's (fully-paid), 1s. 3d.; Golconda, 2s. 6d.; Great Boulder, 2s. 6d.; Hampton Lands, 5s.; Mawson, 2s. 6d.; West Australian Concession, 1s. 3d.

STOCK EXCHANGE SETTLING DAYS.

Settling Days on the Stock Exchange are as follow:—
CONSOLS, Monday, November 5.

STOCKS AND SHARES.

Continuation Days.	Ticket Days.	Pay Days.
Monday, Nov. 12	Tuesday, Nov. 13	Wednesday, Nov. 14
Tuesday, Nov. 27	Wednesday, Nov. 28	Thursday, Nov. 29

LATEST FROM THE MINES.

CABLEGRAMS AND TELEGRAMS.

AFRIKANDER. — A cablegram from Mr. James Mitchell reports the discovery of another reef on the property, 3 feet wide, with an average assay value per ton of 15 dwts.

AURORA.—Last month's crushings of 850 tons yielded 301 ounces of gold.

BAYLEY'S REWARD.—The following cablegram, dated 22nd inst., has been received by this company's London office from Melbourne:—"Week's run, 700 ounces, 93 tons."

BRILLIANT.—1270 tons crushed for 1660 ounces.

BRILLIANT AND ST. GEORGE UNITED.—Messrs. Burkitt, Munro and Co., 16, Cornhill, E.C., have received the following cablegram, dated Charters Towers, 23rd inst.:—"Brilliant and St. George United crushed 126 tons, 508 ounces."

D'ARCY ESTATES.—Report dated September 15:—"Contractors started work on main shaft; sunk 10 feet during week; present depth, 95 feet; bottom in diorite. Prospecting shaft on portion 3 sunk 15 feet."

DAY DAWN P.C.—The following cablegram has been received from the manager at Charters Towers, giving the result of this company's crushing for the fortnight ended October 20, viz.:—"No. 1 shaft, 25 tons, 28 ounces. The reef in the No. 3 level west from main shaft, 2 feet 6 inches; mill test, 40 tons, 71 ounces. No. 3 shaft, 185 tons, 388 ounces; tailings, 7 ounces. Have shipped per s.s. *Merkara* 866 ounces."

ELKHORN.—Bullion produced in the mill for the week ended October 20, 9200 ounces.

EXPLORING LAND AND MINERALS.—The company has received advice that the whole of the grant from the British South Africa Company of 600,000 acres of land in Mashonaland have been marked out, and that of the 300 mining claims granted 160 have been registered. The official survey of the land and the proving of the claims have been put in hand.

FRANK JOHNSON AND CO.—The managing director wires from Salisbury:—"True Inez reef struck middle of our block 4 feet solid, and pans well. The Enev reef is reported to be panning over 1 ounce. The Anriga looks very well. Have just commenced to open latter at 60 feet. Have a new find on the Old Chum 5½ feet wide, and extremely rich. Samples taken from the Lion reef at 40 feet pan 30 dwts. to the ton."

GOLDEN FEATHER CHANNEL.—The following has been received by cablegram from Colonel Frank McLaughlin, the company's general manager at Oroville:—"Heavy storm of wind and rain drowned out claim. Weather favourable for operations now, and have commenced pumping out. Every appearance of present weather continuing into December."

GREAT COOLGARDIE.—The directors announce that the transfer of lease No. 400 (Warn's claim) to the company has been advised by the Commercial Bank of Australia (Limited) as duly completed; and they also inform the shareholders that Mr. William Milford, F.R.G.S., mining engineer, one of the directors of the company, is proceeding to the mine by the steamer *Massilia*, on Thursday next, the 25th inst., for Australia. The directors will take the earliest opportunity after Mr. Milford's arrival at the mine of communicating to the shareholders the result of that gentleman's inspection and enquiry.

HARRIETVILLE. — Gold return for the past four weeks, 500 tons, 136 ounces.

ISLE OF MAN.—The secretary sold on Wednesday 100 tons of this company's ore at £8 7s 6d. per ton.

LOMAGUNDA DEVELOPMENT.—The following cable has been received from Dr. Luer:—"Have struck very rich ore, and expect it to continue in three shafts on Ayrshire."

MACATE.—The following cablegram has been received:—"Wire tramway running very well; mill running day and night; send two millmen."

NEW LOUIS D'OR (Main Reef).—The following is from the last letter received from Mr. Hill, the company's mine manager:—"The shaft I am sinking is upon the main reef, which was struck by the diamond drill at 160 feet, 2 feet 6 inches in width, and gives 1½ ounces of gold to the ton. I am down nearly 40 feet, and have timbered to 30 feet; as I have said before, I don't think I shall want to timber much lower, as the rock is hard and solid."

ORITA.—The directors have received the following cablegram from their superintendent relating to run No. 81:—"We have cleaned up £600, the profit on which is £400."

PAHANG CORPORATION.—The directors have received the following cablegram, giving the output for the month of September:—"In 25 days of 24 hours each 665 tons of stone were crushed, producing 800 cwts. (40 tons) of black tin, 20 head of stamps running. Working costs $10,750.

STAR OF THE EAST.—Mr. Samuel James, of 3, Copthall-chambers, E.C., has received the following cablegram, dated Perth, 25th inst.:—"Star of the East (Murchison) fortnightly return 402 ounces of gold; dividend declared, 6d. per share."

UNITED MEXICAN.—San Cayetano: Gross returns for week ending October 13, $790; expenses, $1240; loss, $450.—El Cubo: Gross returns for week ending October 13, $6330; expenses, $6240; profit, $90.

VICTORIA GOLD MINING ASSOCIATION.—The fortnightly crushing has been cabled as follows:—"270 tons crushed yielded 402 ounces gold."

VICTORIA GOLD MINING ASSOCIATION (Charters Towers).—A dividend of 3d per share has been declared payable November 7.

WORCESTER EXPLORATION AND GOLD MINING.—A dividend of 10 per cent. has been declared, payable on November 20 to all shareholders registered on October 19.

FORTHCOMING MEETINGS.

*** We shall be obliged if Secretaries or other Officials of Mining, Railway and other Companies' will be good enough to advise us as early as possible of the date, time and place of their forthcoming meetings—whether statutory, semi-annual, annual, general or extraordinary, confirmatory or adjourned—in order that particulars may be announced for the benefit of our subscribers and more particularly our country readers. Balance sheets, reports and other matter to be submitted at such meetings should, where possible, accompany the intimations of the meetings sent*

Name of Company.	Place.	Nature of Meeting.	Date.	Time.
Gravel Gold Mines of Colom.	Winchester Ho,	General	Oct. 30	3 p.m.
Guadalcazar Q'kilver Mines	Cannon Street	General	Oct. 31	2 p.m.
Montana Mining Company..	Winchester Ho,	General	Oct. 31	12 noon
New Welsh Slate Company..	Winchester Ho.	General	Oct. 31	2.30 p.m.
New Queen Gold Mining.....	Winchester Ho.	General	Oct. 31	3 p.m.
Australasian Mining Com....	Cannon Street	General	Nov. 1	12 noon

THE NORTH EASTERN GOLD DISTRICT OF SOUTH AUSTRALIA.

By J. B. AUSTIN, Adelaide.

I PROPOSE to give a short general description of what promises to become an important and extensive auriferous district, commencing about 130 miles to the north of Adelaide, extending 125 miles in a N.N.W. direction, thence 160 miles nearly due east, but a little northerly. Roughly speaking, this belt of country would average about 150 miles from west to east, and 60 miles from north to south, thus comprising an area of 9000 square miles. My starting point, 130 miles north of the city, is the Ulooloo diggings, where some good alluvial gold has been obtained from time to time, and where also very promising reefs have been found. One of these is said to be traceable 60 miles in a direction nearly N.N.E. to near Paratoo, where a very good gold-bearing reef has been opened during the present year—and described in *The Mining Journal*—between Nackara and Paratoo. Proceeding along the Great Northern Railway line we come to Petersburg, 154½ miles from Adelaide, and continuing in a N.N.W. direction 14 miles further Black Rock is reached, in which neighbourhood gold is said to have been found, but no mine of importance is being worked there. Near Carrieton, still on the same line, and 30 miles further north, two or three discoveries were made a few months ago, both to the west and east of the township—as far as 25 miles to the east of it. Leaving the railway line at Carrieton, but keeping across country in the same direction for about 30 miles, we find the little township of Gordon on another branch of the railway, and in this neighbourhood also a discovery of gold was recently made. Travelling for another 30 miles to the east we find a patch of mineral country where several copper mines were worked 30 years ago; gold also exists in this vicinity. About 60 miles E.N.E. from this locality, and over 50 miles north of Winnininni on the Broken Hill railway line, is the new auriferous district of Nillinghoo. From this point eastward through the Bimbowri and Boolcoomata runs, nearly to the border of New South Wales, the country is more or less auriferous—this is to the north of the Broken Hill railway line. The border township is Cockburn, and about 25 miles to the south-west from it is the mining district of New Luxemburg, comprising two of the richest known gold mines in South Australia—the Lux and the Queen Bee. The former has lately yielded a large quantity of magnificent specimens, equal in richness to any that we have seen from West Australia, and estimated to contain from 200 to 300 ounces of gold to the ton of quartz. The stone is a fine looking brown quartz, much more attractive to the eye of a gold miner than the glassy hungry looking stone generally characteristic of the Western gold fields. The Lux Mine, even without this wonderfully rich shoot of gold, would be a payable property, as the royal metal is found in nine distinct reefs or lodes, and the main shaft (276 feet deep) has gold right down to the bottom. This mine will henceforth be vigorously worked, a 15 head stamp battery having been purchased. The Queen Bee was opened on a good copper lode, in which, after some little work had been done, gold was found, yielding in bulk 1½ ounce to the ton of ore, also 9 ounces of silver and 32½ per cent. of copper. At the depth of 90 feet an independent reef of gold-bearing stone was cut, 3½ to 4 feet wide, and rich in the precious metal. The want of sufficient capital has rather hindered the development of this mine, which is well worthy of being worked with energy. The main shaft is down to 192 feet, and has 13 feet of water in the bottom. The lodes are 1200 feet in length on the claims, and vary from 3 to 8 feet in width.

Several miles to the north-west from the Lux and Queen Bee Mines is the Boolcoomata Mine, in highly mineralised country; while over 50 miles to the south-west the well-known auriferous district of Wadnaminga and Taltabooka is being worked, and yielding very payable returns. This is 16 miles south of Mannahill. About 22 miles on the other side of Mannahill the rich alluvial gold field of Teetulpa attracted thousands of diggers in October, 1886, and for some time after; 16 miles further west the Wankaringa Gold Mines are still at work, though not at present giving very profitable returns. But for the past 20 years they have given employment to a good number of hands, and have caused a settlement to spring up around; for some time also they paid good dividends to the shareholders. A few miles in a westerly direction from Wankaringa some rich discoveries have recently been made, and it is hoped that a new and important gold field may be opened up, as both alluvial and good reefing ground has been found.

The Government Geologist, Mr. H. Y. Lyell Brown, F.G.S., describes the country beyond Teetulpa eastward to the New South Wales border as comprising the following rocks:—Metamorphic rocks, gneiss, granite, syenite, hornblende, mica schist, crystalline limestone, quartzite with intrusive igneous dykes, diorite, and porphyry; 25 miles N.W. of Mingary, near Putt's Well, on the Boolcoomata run, the bedrock is feldsite containing mica and hornblende—metamorphic, altered by intrusion of eruptive granite dykes—the veinstone of the gold-bearing reefs being quartz with oxide of iron and gossan, the bedrocks being schistose, gneissic, feldspathic, and micaceous. The country further west is chiefly palæozoic (Lower Silurian), comprising sandstone, quartzites, and conglomerates.

My acquaintance with these mining districts dates back 20 and, in some cases, over 30 years. No less than 72 gold mines have been opened in this part of South Australia at various times, besides many reefing claims near Teetulpa. Many of these may yet be profitably worked, under the improved conditions afforded by more modern appliances or processes for the extraction of gold from its matrices. A reasonable amount of capital judiciously expended would secure profitable returns from the working of a large number of auriferous discoveries in this country. In my opinion, founded on the knowledge of certain new inventions for saving gold, we shall within six months have a great boom in gold mining in South Australia. We have an immense area of auriferous country, which, though not rich, can be relied on to yield say from 7 to 12 dwts. of gold to the ton, and the new inventions referred to will save at least 95 per cent. of all the gold at a cost of less than 5s. per ton, exclusive of crushing. At this rate, under ordinary circumstances, 5 or 6 dwts. of gold per ton of stone ought to yield a fair profit.

The African Gold Recovery Company (Limited) reports that some parties to the arrangement lately arrived at through Government official intervention having failed to sign the provisional agreement, their action will render necessary this company's withdrawal from the arrangement.

Mr. S. Howes, London, has been awarded a gold medal (the highest honour) at the Antwerp Exhibition for his "Little Giant" double turbine and display of mill machinery. A gold medal and diploma of honour were also awarded the "Little Giant" at the World's Fair, Chicago.

THE share capital of the West Mallina Gold Mine (Limited), having been largely over-subscribed by the directors and their friends and by the shareholders of the West Australian Mining Company (Limited), it has been deemed unnecessary to advertise the prospectus. Letters of allotment and regret have been posted.

NEW ISSUES.

HANNAN'S REWARD GOLD MINING COMPANY (LIMITED).

THE capital of this new company is £70,000, divided into 70,000 shares of £1 each, of which £22,000 is to be reserved for working capital. The prospectus says:—"This company has been formed to acquire and work mining leases No. 265 and No. 442, containing together 27 acres, situate on Hannan's Hill, about 30 miles north-east of Coolgardie, in the Yilgarn Gold Fields of Western Australia, between the Mount Charlotte and the Cassidy's Hill Gold Mines. It includes the famous Hannan's Reward Claim, which constitutes one of the very few reward claims granted by the Government of the colony It will be seen from the reports and plan that a large amount of development work has already been done, and that the company is a proved gold mine of great richness. Up to the receipt of the latest cable advices, the entire cost of development, in addition to the general working expenses, have been defrayed by the sale of gold obtained by hand picking. Samples of gold taken from the mines can be seen at the offices of the company." The reports of the experts show that the mine has been considerably developed, with highly favourable results, the whole cost being defrayed by the gold being picked by hand. Three shafts have been sunk to a considerable depth, and are now connected by a crosscut.

CARLYLE GOLD MINES (LIMITED).

The capital of this company is £75,000, in 75,000 shares of £1 each, "It is incorporated," the prospectus states, "for the purpose of acquiring two valuable gold mining leases numbered 216 and 218, known as the 'Carlyle and Pass By,' comprising an area of 16 acres, and situated at Parker's Range on the famous Yilgarn Gold Field, Western Australia. The property is held under lease from the Government, which gives an absolute title, subject to the conditions of the Mining Act. Reports on these mines have been made to the vendors by Mr. James B. Spence, B.A. (Camb.), mining engineer, and Mr. A. Jacobsen, manager of the McIntosh Gold Mines (Limited), Parker's Range. The mines to be purchased by this company have been worked by the present owners for the last two years, and have been carefully proved and developed in a thoroughly practical way. Mr. Jacobsen, in his report, states that, with suitable machinery, he has not the slightest doubt the property could be made a good dividend-paying concern. Seven shafts have been sunk, varying from 40 feet to 102 feet, and the reef has been exposed for some 250 feet between Nos. 4 and 5 shafts, proving them to be on the same line of reef as Nos. 2 and 3 shafts, in which the reef has been cut 3 feet wide and very rich. The hanging wall in No. 3 is of rich ironstone, giving very high results. These shafts show the reef to increase in width as depth is attained. Crushings from No. 5 shaft yielded 130 ounces gold from 40 tons. The last crushing (as advised by Mr. Jacobsen, under date August 18 last) of 51 tons yielded 60 ounces gold, and was taken from all parts of the mine."

MINING NOTES.

HOME, COLONIAL, AND FOREIGN.

FORTY pounds weight of magnificently rich gold specimens has been placed in the Union Bank, Coolgardie, by S. Stein. The specimens were taken from two leases situated nine miles north of Mount Margaret, 162 chains south-west of Eagle's Nest. The reef runs right through both blocks for a quarter of a mile, and outcrops along the surface for the whole length. It has been proved at a depth of 5 feet to be 2½ feet wide. The specimens were taken from various portions of the reef on both sections. The whole of the stone is beautifully veined with coarse gold, the veins being broad and solid. The quartz is a bright amber colour, is iron stained, and is easily treated. Stein has had a party of seven prospectors out over the country for the past three months.

THE Perth banks shipped 8600 ounces of gold to Melbourne, on September 13. Of this quantity 1475 ounces were a transhipment, and came from the Murchison Gold Field, 1695 ounces were the product of Yilgarn, and 5430 ounces represented the contribution of Coolgardie.

THE *Miners' Right* announces that it is in receipt of telegrams from Coolgardie speaking disparagingly of the Wealth of Nations. The telegrams come from the editor, who is now on the field, and he is credibly informed that the mine is not nearly so rich as hitherto alleged.

A PARCEL of stone has been brought in from the Lady Evelyn Mine, Coolgardie, taken from a depth of 70 feet in the underlie shaft, where a very rich shoot is met with. The stone is much ironstained. Coarse gold is plentiful all through the reef. The rich shoot is probably small in extent, but it is the best stone met with in the mine.

THE deepest gold-bearing quartz in Australia has just been cut in the New Chum Railway Mine at Sandhurst at 2800 feet. It is believed to be payable.

NETTLE and party's find at Billabrotha, Yalgoo fields, is sensationally rich. The reef intersected shows gold in fractures of the reef in coarse lumps. The metal can be seen glittering in the reef some distance away. The reef is 4 feet wide. The prospectors pegged out 30 acres, and dollied 100 lbs. of stone for 100 ounces of gold.

ANOTHER rich find of gold is reported from the Marengo field, near Grafton, N.S.W.

MR. JOHN HAYS HAMMOND altogether dismisses the idea that the reefs of Rhodesia are segregated. He pronounces them to be fissure lodes, and there is no doubt that the statement will do much to encourage the mining industry in the British South Africa Company's territories.

Now that the recently discovered reef of the Witwatersrand (Knight's) Gold Mining Company has been proved from end to end of the property, it is the intention of the directors to buy and at once proceed with the erection of a new 60-stamp battery.

THE s.s. *Ormuz*, which arrived on Thursday at Plymouth, brought gold to the value of £10,000 from the Londonderry Mine, Western Australia.

— Letters of allotment and regret in the COOLGARDIE MINES ISSUING SYNDICATE (LIMITED) have been posted.

— The directors of the SOUTH AFRICAN GOLD TRUST have declared an interim dividend at the rate of 15 per cent. per annum for the six months ended June 30.

— The *Times'* Paris correspondent telegraphs that a company, backed by the Crédit Lyonnais, is being formed there, with a capital of 10,000,000f., 1,000,000 being paid up, to work gold mines and other enterprises in the Transvaal.

THE METAL MARKETS.

LONDON METAL MARKET.

THE METAL MARKET, LONDON, OCTOBER 26.

Copper.

SPECULATIVE purchases, induced by rumours of negotiations being afoot for a combination amongst producers, have imparted firmer tone to this market, which closes about 5s. per ton higher than it opened. The following is a sketch of the course of the market:—It opened flat at £41 three months and £40 11s. 3d. s.c.—£40 18s. 9d. was accepted later on for various January prompts, and in the afternoon three months changed hands at £40 17s. 6d., the turnover for the day amounting to about 600 tons. There was no special feature in the market on Monday, but on Tuesday, after a further decline to £40 8s. 9d. s.c., and £40 16s. 3d. three months, the market began to wear a firmer aspect, and up to £41 1s. 3d. three months was done, whilst £41 5s. and £41 2s. 6d. were paid on Wednesday for that position, and £40 15s. and £40 16s. 3d. for s.c. Total transactions for these two days amounted to about 1425 tons. Thursday opened a little lower, £40 11s. 3d. being taken for s.c., but later the tone rallied, and £40 13s. 9d. s.c. and £41 1s. 3d. three months were done. To-day spot G.M.B.'s. were done up to £40 18s. 9d., and three months at £41 5s., receding slightly afterwards, and closing quiet but steady at £40 16s. 3d. to £40 17s. 6d. s.c., and £41 3s. 9d to £41 5s. three months.

Tin.

This market was weakened on Monday by considerable sales, a fall of about £1 per ton taking place on first change from the prices at which the previous week closed. On Wednesday there was good buying, resulting in a sharp rise to £68 5s. s.c., and £68 15s. three months, about 400 tons changing hands. Yesterday we had a quieter market, with a relapse to £67 17s. 6d. three months, and £67 12s. 6d. s.c., and to-day, after transactions at down to £67 s.c. and £67 5s. three months, the market closes steady at £66 17s. 6d. to £67 s.c., and £67 2s. 6d. to £67 5s. three months. In the Dutch market, to-day's values are unchanged, and Banca is quoted at 41¼.

Pig Iron.

The shipments from Scotland last week were 3017 tons, or 1316 tons less than in the corresponding week of last year. The Glasgow market opened ½d. better at 42s. 4d. s.c. Scotch in steady tone. A moderate business was done in s.c. at 42s. 4d. to 42s. 5d., and in three months at 42s. 7½d. Tuesday's values were about the same, excepting that cash touched 42s. 5½d. On Wednesday it changed hands at 42s. 5d. to 42s. 6½d., on Thursday at 42s. 6d. and 42s. 5½d., and to-day at up to 42s. 7d., the market closing firm at 42s. 6½d. buyers, with hematite at 43s. 6½d., and Middlesborough at 35s. 7½d.

Lead

has remained quite steady all the week at last week's closing price—viz., £9 16s. 3d. for soft foreign. Business has taken place thereat, and we close firm at £9 16s. 3d. soft foreign, and £9 17s. 6d. to £10 English.

Spelter.

There have been buyers throughout the week at £15, and no sellers below £15 2s. 6d., but through the ignorance and carelessness of a reporter, some of the papers on Wednesday, the 24th inst., returned the price as £14 15s. to £15, which for the moment rather upset the market, but which was, however, followed by, if anything, a steadier tone than previously. We close steady at £15 ordinaries, and £15 2s. 6d. to £15 5s. specials.

Antimony

is very steady at £33 to £34—*i.s.*, at unchanged values.

Quicksilver.

The importer has not lowered his price of £6 s., but seconds are easier at £6 9s. 6d.

The following are to-night's (October) prices of metals:—

	£	s.	d.		£	s.	d.
Copper.							
Tough cake and ingot	43	15	0	.....	44	5	0
Best selected	44	5	0	.....	44	15	0
Sheets and sheathing	52	0	0	.....	52	10	0
Flat bottoms	55	0	0	.....	55	10	0
Chili bars, Good merchantable, spot, & 3 months respectively	40	15	3	.....	41	3	9
Copper tubes, seamless	—			.....	0	0	7½
Alloys.							
BRASS: Wire	—			.....	0	0	5
,, Tubes (solid drawn)	—			.....	0	0	6
,, Sheets	—			.....	0	0	5¾
PHOSPHOR BRONZE: Alloys II.	—			.....	78	0	0
,, ,, III. or V } Cog Wheel Brand	—			.....	81	0	0
,, ,, VII. }	—			.....	83	0	0
,, ,, XI.	—			.....	78	0	0
,, ,, Vulcan brand A1	—			.....	72	0	0
DUBO METAL	—			.....	73	0	0
BULL'S METAL	—			.....	65	0	0
Ferrobronze (Vivian's).							
Ingots ...per lb.	0	0	5¼	.....	—		
Ordinary sheets, plates, bolts and bars	0	0	6¾	.....	—		
Screw bolts and nuts	0	0	8	.....	—		
Pump rods, plain	0	0	7	.....	—		
,, finished	0	0	10	.....	—		
DELTA METAL: No. 4 (per ton)	—			.....	73	10	
,, Sheets and plates (per lb.)	0	0	10½	.....	—		
,, Bars, round, square, flat (per lb.)	0	0	9¾	.....	—		
,, ,, hexagon (per lb.)	0	0	9	.....	—		
Tin.							
English, ingots, f.o.b.	70	10	0	.....	71	0	0
,, bars	71	10	0	.....	72	0	0
,, refined	72	10	0	.....	73	0	0
Straits, spot and 3 months respectively	66	17	6	.....	67	2	6
Australian spot, and three months respectively	67	0	0	.....	67	5	0
Banca ,, (in Holland)	69	5	0	.....	69	7	6
TIN PLATES: Charcoal, best quality per box	0	15	0	.....	0	17	6
,, ,, ordinary	0	13	0	.....	0	14	6
,, Coke, best quality	0	10	3	.....	0	10	9
,, ,, ordinary	0	10	0	.....	0	10	3

These prices of tinplates are f.o.b. at Swansea: at Liverpool 6d. per box more.

Iron.							
Pig, G.M.B., f.o.b., Clyde, spot	—			.....	2	2	3½
,, Scotch pig, No. 1 Gartsherrie	—			.....	2	13	0
,, ,, Coltness	—			.....	2	16	6
,, ,, Clyde	—			.....	2	10	6
,, ,, Govan	—			.....	2	4	0
Bars, Welsh, f.o.b. Wales	—			.....	5	2	6
Plates ,,	—			.....	6	0	0
Bars, Staffordshire, at works	—			.....	5	5	0
Sheets ,, ,,	—			.....	6	10	0
Plates ,, ,,	—			.....	6	5	0
Hoops ,, ,,	—			.....	5	12	6
Ship plates, Middlesborough	—			.....	4	17	6
STEEL: English spring	—			.....	8	10	0
,, ,, cast	—			.....	42	0	0
,, Rails at works, according to section	3	10	0	.....	4	15	0
Lead.							
Spanish or soft foreign	—			.....	9	16	3
English pig, common	9	17	6	.....	10	0	0
,, L.B.	—			.....	10	10	0
,, sheet and bar	—			.....	11	0	0
,, pipe	—			.....	11	10	0
,, red	—			.....	12	10	0
,, white	—			.....	13	10	0
,, patent shot	—			.....	14	0	0
Spelter.							
Silesian ordinary brands	—			.....	15	0	0
,, special brands	15	2	6	.....	15	5	0
English Swansea	13	12	6	.....	15	15	0
Sheet Zinc	13	5	0	.....	13	10	0
Antimony.							
Antimony	33	0	0	.....	34	0	0
Quicksilver.							
Flasks, 75 lbs. warrants	6	9	6	.....	6	15	0
Manganese.					per unit.		
Ore, c.i.f., U.K. ports 1st quality, 50 per cent. and upwards	0	0	10¾	.....	0	0	11¼
2nd ,, 47 per cent. to 50 per cent.	0	0	9	.....	0	0	10
3rd ,, 40 ,, 47 per cent.	0	0	8	.....	0	0	9
Aluminium.							Per lb.
98-99¼ per cent. (guaranteed 98 per cent. min.) in ingots (1 cwt. lots)					0	1	9
do do (1 ton lots)				.....	0	1	8½
Nickel.							
98-99 per cent. guaranteed	0	1	4	.....	0	1	5

"THE MINING JOURNAL" SHARE LIST.

ABBREVIATIONS AND REFERENCES.—The following are the significations of the abbreviations and references which occur in the Share List:—*Ay*, Antimony; *A*, Arsenic; *Bl*, Blende; *Bx*, Borax; *C*, Copper; *D*, Diamond; *G*, Gold; *I*, Iron *L*, Lead; *M*, Mundic; *N*, Nitrates; *P*, Phosphates; *Q*, Quicksilver *R*, Ruby; *S*, Silver; *S-l*, Silver-lead; *Sul*, Sulphur; *T*, Tin; and *Z*, Zinc. * in the "called up" column of British Mines, signifies that the mine is conducted on "Cost Book" principles: † in the "Head Office" column of African Mines, signifies that the address given is not that of the head office, but of a sub- or transfer office and ‡, following the names of African mines, signifies that they are subject to the Limited Liability Law of the South African Republic.

The following is by far the most complete and comprehensive list of mines, in whose shares business is being currently transacted, published. Additions will be made from time to time as occasion requires. Every effort is made to ensure accuracy, and Secretaries of Companies, Share dealers, and our readers generally, are cordially invited to co-operate with us to this end, by notifying us of any errors that may at any time occur. We desire it to be understood that, while our Share List will almost invariably be found correct; we do not hold ourselves responsible for any loss or inconvenience that may arise from possible inaccuracies.

BRITISH MINES.

Name.	Closing Price, Oct. 26, 1894	Closing Price, Oct. 19, 1894.	Par.	Latest Dividend	Called up Per Share.	Amount of Stock or No. of Shares Issued	Situation of Mine.	Head Office
			£ s.		£ s. d.			
Atlas .....*T*	—	—	1 0	—	1 0 0	12,000	Devon	Camborne.
Blue Hills .....*CT*	2/6 5/-	2/6	*	2/- May, '81	5 12 6	5,353	Cornwall	Camborne.
Botallack .....*T*	1 1⅛	1	*	—	51 4 6	1,880	Cornwall	St. Just.
Carn Brea .....*T*	5 5⅛	5⅛	*	2/6 Dec., '93	21 18 6	6,000	Cornwall	Carn Brea.
Cook's Kitchen ..*T*	2/6 5/-	5/-	*	—	35 15 10	4,900	Cornwall	Camborne.
Cumberland .....*L*	—	—	1 0	5% May, '88	1 0 0	51,988	Cumberland...	7, Angel-court E.C.
Derwentwatr.*CLZ*	—	—	1 0	—	1 0 0	50,000	Cumberland..	Manchester.
Devon Gawton *CA*	par. ¼ pm.	p.¼p.m	1 0	—	0 7 6	2[illegible],000	Near Tavistock	8, Finsbury circus.
Devon Gt Cons.*CA*	1⅛ 1¾	1⅛	5 0	3/- May, '94	2 0 0	10,240	Devon	8, Finsbury circus.
Dolcoath .....*T*	57 58	59	*	12/6 Apr. '94	9 12 6	4,700	Cornwall	Camborne
Drakewalls *CTM*	-/3 -/6	-/3	0 5	—	0 2 0	61,856	Cornwall	Dashwood House.
EastGrassington*L*	—	—	1 0	—	1 0 0	20,945	Yorkshire.....	5, Copthall-buildings
East Pool .....*AT*	6 6¼	7	*	1/6 Sept, '94	0 9 9	8,400	Cornwall	Illogan.
Gawton .....*CA*	—	—	2 10	—	2 7 0	12,000	Devon	20, Great St. Helens.
Great Laxey.....*L*	1¾ 2¼	1¾	4 0	5/- Apr., '92	4 0 0	15,000	Isle of Man ...	Douglas, Isle of Man.
Green Hurth ...*L*	1/6	1/6	1 0	-/6 June '89	0 19 0	32,[illegible]	Cumberland...	Newcastle.
Halkyn ... . *L*	—	—	1 0	2/- Sept., '94	1 0 0	10,000	Flintshire.....	Chester.
Hexworthy .....*T*	—	—	1 0	—	1 0 0	14,634	Devon	6, Queen-street-place
Isle of Man .....*L*	—	—	5 0	2½ p c Sep. '94	5 0 0	14,000	Isle of Man ...	Chester.
Killifreth .....*T*	2 2¼	2¼	*	2/- July, '94	5 11 6	6,000	Cornwall	Truro.
Leadhills .....*L*	1 1¼	1	6 0	3/- Sep. '92	6 0 0	20,000	Lanarkshire...	30, Finsbury-circus.
Levant .....*CT*	—	—	*	2/6 July, '94	11 9 6	2,500	Cornwall	Penzance.
Lovell .....*T*	—	—	*	1/3 Nov., '91	1 18 7	7,165	Wendron	3, Gt. Queen-st.,S.W.
Minera.....*L*	—	—	5 0	5/6 Mar. '90	5 0 0	9,000	Denbighshire.	Minera, N. Wales.
Neathd&Tndle.*LZ*	1/6	1/3	1 0	6% Feb., '91	0 18 0	48,8[illegible]	Northumberld	Newcastle-on-Tyne
New Balleswidd'n*T*	—	—	1 0	—	1 0 0	25,000	Cornwall	St.Clement's Ho.,E.C
NewCooksKitn.*TC*	—	—	*	—	10 18 3	4,800	Cornwall	Camborne.
New Minera	—	—	1 0	1/- Oct., '92	1 0 0	30,000	North Wales...	6 Queen-street-place.
Paro .....*LZ*	—	—	1 0	—	1 0 0	5,000	Llanrwst.....	Billiter sq. buildings
Phœnix United*TC*	1/- 3/-	1/-	*	1/- Mar. '90	7 4 6	10,666	Cornwall	Falkeard.
Polberro .....*T*	20/- 25/-	20/-	*	—	3 7 9	18,000	Cornwall	37, Walbrook.
So. Condurrow *TC*	7/6 12/6	7/6	*	3/6 Apr. '93	7 12 1	6,123	Cornwall	20, Great St. Helens
South Crofty *TA*	5/- 15/-	15/-	*	—	17 7 6	6,120	Cornwall	Pool, Cornwall.
S. Frances Unid. *T*	5/- 10/-	7/6	*	—	2 7 6	6,000	Cornwall	Redruth.
Tincroft .....*T*	9 9¼	9¼	*	2/- Aug. '94	15 7 6	6,000	Cornwall	Carn Brea.
Weardale .....*L*	9/-	9/-	4 0	1/3 Oct. '90	1 10 0	50,000	Durham.....	3, Lombard-court.
West Frances ...*T*	5/- 10/-	7/6	—	2/6 May, '89	16 0 7	6,144	Cornwall	Camborne.
West Kitty .....*T*	5 5¼	5	*	3/- Aug, '94	1 2 0	6,000	Cornwall	37, Walbrook.
Wheal Agar ..*TA*	12/6 17/6	17/6	*	2/6 Aug. '88	23 5 2	6,000	Cornwall	Redruth.
Wheal Basset ...*TC*	1 1¼	1	*	10/- Apr.'88	12 5 0	6,144	Cornwall	Redruth.
Wheal Friendly..*T*	-/6 1/-	-/6	*	—	0 12 5	10,000	Cornwall	110, Cannon-st., E.C.
Wheal Grenville *T*	14 15	14¼	*	5/- Aug. '94	18 2 0	6,000	Cornwall	7, Union-court, E.C.
Wheal Kitty .....*T*	5/- 7/6	7/6	*	3/- Mar. '88	4 5 8	8,580	Cornwall	Truro.
Wheal Metal &F.*T*	⅛ ¼	⅛	*	—	0 13 9	10,784	Cornwall	14, Broad-street Av.

AUSTRALIAN AND NEW ZEALAND MINES.

Abbotts .....*G*	par ⅛ pm.	1/16	1 0	—	0 7 6	100,000	Murchison ..	17, Old Broad st.
Achilles Gld Fld.	2/6 3/6	2/6	1 0	—	1 0 0	80,307	New Zealand	3, Church Pas , E.C.
Aladdins Lamp *G*	1⅜ 1⅝	1⅛	1 0	1/- Apr. '54	1 0 0	100,000	N. S Wales ...	4-6, Throg. Avenue.
Amana (Went.) *G*	—	—	1 0	—	1 0 0	75,000	N. S. Wales ...	5, Throg. Avenue.
Anglo-Saxon ...*G*	—	—	1 0	2/- July, '89	1 0 0	51,000	Queensland ..	4, Lombard-court.
Austin.....*G*	par ⅛ pm.	1/16p.m	1 0	—	0 7 6	50,000	W. Australia...	23, College hill, EC
Australasian .....*G*	3/- 3/6	3/-	1 0	-/6 Mar., '92	1 0 0	210,000	Queensland ..	6, Queen-st. place
Australian .....*C*	—	—	20 0	1/6 July '94	7 7 6	18,315	So. Australia	15, Old Jewry Chbrs,
Aus. Bro. Hill Con.	1/6 2/-	1/6	1 0	1/- June, '91	1 0 0	537,138	N. S. Wales ...	Winchester House.
Baker's Creek ...*G*	1¾ 1¾	1½	1 0	1/- Sept. '94	0 17 6	150,000	N. S. Wales ...	2, Met. Ex. Buildings
Bayley's Reward *G*	20/- 21/-	20/6	1 0	-/4 Oct. '94	1 0 0	480,000	W. Australia...	14, Sherborne ln.,E.C
Blackett's Claim *G*	16/3 18/9	18/9	1 0	—	1 0 0		W. Australia...	6, Gt. St. Helens'
Blue Spur & G. G.	-/6 1/-	-/6	1 0	—	1 0 0	80,093	New Zealand	3-5, Gracechurch-st
Bonnie Dundee *G*	3/- 3/6	3/-	1 0	—	0 18 0	120,000	Queensland ..	Charters Towers.
Brilliant..... .....*G*	15/- 16/-	13/6	2 0	-/6 Oct. '94	2 0 0	250,000	Queensland ..	3, Gracechurch-st.
Brilliant Block ..*G*	1¾ 1⅜	1¼	2 0	-/9 Aug. '94	2 0 0	250,000	Queensland ...	Charters Towers.
Brilliant, St. Geo.	19/- 21/-	20/-	0 10	6d. Oct. '94	0 6 3	72,000	Queensland ...	8, Stephens Go E C.
Brit. Brok. Hill *S*	3/- 4/-	⅛	5 0	—	5 0 0	240,000	N. S. Wales ...	Dashwood Ho., E.C.
Broken Hill Prop.	2⅜ 2⅝	2⅛	0 8	1/- Nov. '94	0 8 0	960,000	N. S. Wales ...	Dashwood Ho., E.C.
Brkn. Hill P. Bl.10	—	—	10 0	1/- Feb. 94	9 13 0	100,000	N. S. Wales ...	117,Leadenhallst.EC
Brkn. Hill P. Bl.14	—	—	5 0	—	5 0 0	10,000	N. S. Wales ...	117,Leadenhallst.EC
Carrington.....*G*	1/3 1/9	1/3	12/6	—	0 12 6	100,000	Queensland ...	9, Tokenhouse Yard.
Con. G. M. of W. A.	par ⅛ pm.	1	1 0	—	0 7 6	90,000	W. Australia...	14, Hill st., Edinboro'
Coolgardie .....*G*	-/7½ -/10⅜	—	0 2	—	0 0 6		Coolgardie.....	
Craven's Cal. .....*G*	2/3 3/3	2/9	0 6	-/3 June '94	0 4 8	100,000	Queensland...	30-1, S. Swithin's-le.
Croydon King B. *G*	3/- 5/-	3/-	0 5	—	0 5 0	80,000	N. Queensland	Leadenhall Big. E.C.
Cumbrind (New)*G*	-/6 1/-	-/6	1 0	2/6 Dec, '87	1 0 0	184,890	Queensland ...	Blomfield House.E.C
DayDawn B.&W.*G*	7/6 8/-	7/6	1 0	-/6 Mar. 93	1 0 0	498,400	Queensland ...	3-5, Gracechurch-st.
Day Dawn P. C. *G*	4/9 5/3	⅛	1 0	-/6 Apr, '92	1 0 0	490,000	Queensland ...	Winchester Ho.,E.C
Eaglehawk .....*G*	1/6 2/-	1/6	1 0	—	0 19 6	120,000	Victoria.....	31, Lombard-street,
Empress Coolgr. *G*	⅜⅛ -⅛⅛ dis.	⅜⅛	1 0	—	0 7 6	90,000	W. Australia...	2, Tokenhouse bldgs
Eng. & Aus.Cop.Co.	⅛⅛	⅛⅛	2 0	2½ 1883	1 17 6	70,000	So. Australia	136, Palmerston-bldg
Etheridge .....*G*	-/1⅛	-/3	0 5	—	0 5 0	324,290	Queensland ..	6-7, Queen-street-pl.
Frederick the Gt *G*	par. ⅛ pm.	p⅛p.m.	1 0	—	1 0 0	125,000	Victoria.....	8r. George's House.
Glenrock .....*G*	1/- 1/6	1/-	1 0	—	0 19 6	225,000	N. Zealand ..	3-5, Queen-st, E.C.
Golconda .....*G*	16/3 18/9	18/9	1 0	—				14, Sherborne ln., E.C
Great Boulder ..*G*	⅝⅛ ⅜⅛ dis.	⅜⅛	1 0	—	0 10 0	} 100,000	W. Australia...	3, Gracechurch st.
Great Boulder ..*G*	10/- 11/-	—	1 0	—	1 0 0		W. Australia...	3, Gracechurch st.
Golden Gate.... *G*	1/- 1/6	1/-	0 10	—	0 10 0	150,000	Queensland..	9, Tokenhouse Yard.
Hampton Lands...	2⅜ 3	3	1 0	—	1 0 0	53,164	W. Australia..	1, Whittington Avue
Hampton Plains..	1⅞⅛ 1⅝⅛	—	1 0	—	0 4 0	350,000	W. Australia...	29, 8. Swithin's lane
Harrietville .....*G*	—	—	1 0	-/6 July, '90	1 0 0	146,330	Victoria.....	6-7, Queen-street-pl.
Kaboonga .....*G*	1/3 1/9	1/3	0 10	—	0 10 0	500,000	Queensland ...	70-71, Bishopsgate st.
Kangarilla .....*S*	3/- 3/6	3/-	1 0	—	1 0 0	88,275	So. Australia	68, Coleman-street,
Kapanga.....*G*	3/6 4/-	2/6	1 0	-/6 Jan. '91	0 19 6	250,000	N. Zealand ..	9, New Broad-street.
Kilkivan.....*G*	1/6 2/-	1/6	1 0	—	1 0 0	81,392	Queensland ...	4, Coleman-street.
L.& W. Aust. Expl.	1⅛⅛ 2⅛⅛	1⅝⅛	1 0	—			W. Australia...	28 & 29,8.Swithin's ln
Mawson'sRewrd.*G*	1⅛ 1¾	1¼	1 0	—			W. Australia...	
Midas G. F. ... *G*	—	—	1 0	—	1 0 0	60,000	Victoria.....	32, Poultry, E.C.
Mills' Day Dawn*G*	1⅝⅛ 1⅞⅛	1⅝⅛	1 0	-/6 Oct, '54	0 15 9	300,000	Queensland ..	3, Gracechurch-st.
Moruya .....*GS*	—	—	1 0	—	1 0 0	55,235	N. S. Wales ...	16, St. Helen's-place.
Mosman .....*G*	1/8 2/-	1/6	1 0	-/3 Jan., '94	1 0 0	185,000	Queensland ...	3-5, Gracechurch-st.
Mt. Leyshon .....*G*	-/6 1/-	-/6	1 0	-/6 Dec. '90	1 0 0	157,989	Queensland ...	7, Draper's-gardens.
Mountain Maid *G*	2/- 3/-	2/-	0 10	—	0 6 3	56,000	Queensland...	Leadenhall Bldgs.
Mount Morgan *G*	2⅛⅛ 2⅝⅛	2⅛⅛	1 0	-/6 Sept. '94	0 17 6	1,600,000	Queensland ...	50, Lime-street,
Mt. Shamrock *GB*	—	—	1 0	—	1 0 0	275,000	Queensland ..	9, Tokenhouse-yard.
Mount Zeehan *SL*	-/6 1/-	-/6	1 0	—	1 0 0	193,257	Tasmania	Mansion Ho. Cham.
N. Smithfield .. *G*	—	—	0 10	3/- July, '9	0 10 0	48,000	Gympie.....	Queensland.
New Queen .... *G*	5/8 6/-	5/6	1 0	-/6 Apr., '94	0 19 6	188,915	Queensland ...	30, St. Swithin's-la.
No. 7 N. E. Queen	-/6 1/-	-/6	5 10	-/3 Sept, '92	0 8 9	96,000	Queensland ...	30, St. Swithin's-la.
PhœnixGold.PileG	—	—	0 5	-/9 Aug. '94	0 5 0	48,000	Gympie.....	Gympie, Queensland
Port Phillip .....*G*	-/3 -/9	-/3	0 5	—	0 5 0	200,000	Victoria	57, Moorgate-st.,E.C.
Queen's Bthdy Un	11/- 12/-	11/-	1 0	—	0 12 6	75,000	Victoria	7-8, Gt. Wnchester St.
Queens. Smelting	⅛⅛ ⅜	⅛⅛	1 0	—	1 0 0	38,244	Queensland ...	9, Tokenhouse Yard.
ScottishAustralian	¾ 1	¾	1 0	4 4-5d. May,'94	1 0 0	200,00	N.S. Wales ...	Winchester Ho. E.C.
Sunburst.....*G*	—	—	0 10	-/6 Mar. '92	0 10 0	150,000	Queensland ...	9, Tokenhouse Yard.
Tasmanian Crown	—	—	1 0	—	1 0 0	125,990	Tasmania	8, Old Jewry, E.C.
Tipperary .....*G*	—	—	1 0	—	1 0 0	35,000	N. Zealand ...	3-5, Queen-st., E.C.
True Blue .....*G*	—	—	1 0	-/3 July, '94	1 0 0	53,000	Australia	Leadenhall Big. E.C.
Victoria Associatn.	—	—	1 0	-/3 Nov. '94	1 0 0	144,000	Char. Towers	6, Crosby-square
Victory.....*G*	5/6 6/6	4/-	0 5	-/6 Mar., '94	0 5 0	200,000	Queensland ...	32, Gresham-st., E.C
Waihi.....*G*	2⅝⅛ 2⅞⅛	2⅝	1 0	1/- June '94	1 0 0	150,000	New Zealand	11, Abchurch-ln. E.C
Wentworth Ord.*G*	4/6 5/6	4/6	1 0	—	1 0 0	350,000	N. S. Wales ...	4-6, Throgmort. Av.
Went. Priority...*G*	12/- 14/-	12/-	1 0	6/- Jan. '93	1 0 0	150,000	N. S. Wales ...	4 6, Throgmort. Av.
W. Argentine ... *G*	1/- 1/6	1/-	1 0	—	0 19 6	150,000	N. Zealand ...	3-5, Queen-street.
W. Aust. Concessn	1⅝⅛ 1⅞⅛	1⅝	1 0	—	1 0 0	25,000	W. Australia...	33, Old Broad st., EC
W. Aus. Exploring	⅛⅛dis	⅛⅛pm		—			W. Australia...	54, Old Broad st., EC
W.Australian G.F.	2⅝ 3⅛	3	1 0	—	1 0 0	65,000	W. Australia...	28-29, 8. Swithin's-ln.
W. Aust. Mining	10/- 11/-	8/-	1 0	—			W. Australia...	257, Winchester Ho,
White Feather ...	1⅛⅛ 2⅛⅛	1⅛⅛	1 0	—		60,000	W. Australia...	28 & 29,8.Swithin's ln
Zeehan Montana *S*	—	—	1 0	8d Aug., 94	1 0 0	66,000	Tasmania	11, Queen Victoria st
Zeehan Montana *S*	—	—	1 0	5d Aug., 94	0 12 6	12,600	Tasmania	11, Queen Victoria st

EUROPEAN MINES.

Alamillos .....*L*	⅝ ⅞	⅝	2 0	-/6 Oct. '94	2 0 0	25,000	Spain	6, Queen-street-place
Avala .....*Q*	0 ¼	0	1 0	1/- May '93	1 0 0	150,047	Servia.....	4, Tokenho. Bldgs.
Consett Ore ..... *I*	5¼	5¼	1 0	5/- July '94	1 0 0	55,200	Spain	19, Grey-st.. N'castle.
English Cr. Spelter	⅜ ⅝	⅜	1 0	2½ % Aug. '94	1 0 0	84,000	Lombardy	9, Queen-street-place
Fortuna ... . *L*	20/- 25/-	¾	2 0	1/- Oct. '94	2 0 0	25,000	Spain	6, Queen-street-place
Libiola.....*C*	3¼ 3½	3¼	5 0	2/6 Aug. 94	5 0 0	50,400	Italy	Dashwood Ho., E.C.
Linares .....*L*	3¼ 3½	3¼	3 0	5/- Oct., '94	3 0 0	14,998	Spain	6, Queen-street-place
Mason & Barry....*C*	1¾ 2	1¾	5 0	2/- May. '94	5 0 0	185,172	Portugal	87, Cannon-street.
Oscar .....*G*	—	—	5 0	—	0 4 6	117,240	Norway	6A, Austin Friars.
Pestarena .....*G*	3/- 3/6	3/3	3 0	—	3 0 0	67,809	Italy	6-7, Queen-street-pl.
Rio Tinto .....*C*	15⅜ 15⅝	14⅜	10 0	4/- Oct., '94	10 0 0	225,000	Spain	30, St. Swithin's-lane
Do. (Mort. Bonds)	103 105	103	100 0	5% Oct., '94	100 0 0	£1692,740	Spain	30, St. Swithin's-lane
Do. (2nd do.)	101 103	101	100 0	5% Oct., '94	100 0 0	£1024,860	Spain	30, St. Swithin's-lane
Do. (3rd do.)	100 102	100	100 0	5 p.c. Oct., 94	100 0 0	£567,080	Spain	30, St. Swithin's-lane
Sipanji .....*AG*	7/- 9/-	9/-	1 0	—	0 19 0	96,000	Servia.....	120,Bishopsgt-st.Wn.
Tharsis.....*C Sul*	5 5¼	4¾	2 0	12½ % Mar. '94	2 0 0	625,000	Spain	Glasgow.
West Prus Pre.pref	—	—	10 0	3% Oct., '94	10 0 0	365	Germany	Walbrook Ho., E.C.
West Prussian Pre.	—	—	10 0	3% Oct., '94	10 0 0	5,450	Germany	Walbrook Ho., E.C.
West Prussian Or.	—	—	10 0	3% Oct., '94	10 0 0	14,050	Germany	Walbrook Ho., E.C.
Wohlfahrt .....*L*	—	—	1 0	3% June, '94	1 0 0	99,634	Prussia	17, Victoria-st., S.W.
Wohlfahrt	—	—	1 0	3% June, '94	0 10 0	9,099	Prussia	17, Victoria-st., S.W.

INDIAN AND ASIATIC MINES.

Name.	Closing Price, Oct. 26, 1894	Closing Price, Oct 19, 1894.	Par.	Latest Dividend.	Called up per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
			£ s.		£ s. d.			
Asia Minor Pref. *St.*	—	—	0 10	—	0 10 0	42,430	Asia Minor ...	2, Metal Ex Bldgs.
Do. Ord. ...	—	—	0 10	—	0 2 0	51,584	Asia Minor ...	2, Metal Ex. Bldgs.
Balaghat MysoreG	5/- 6/-	5/-	1 0	—	0 18 0	160,000	India	6-7, Queen-street-pl.
Burma Ruby.....*R*	3/- 4/-	⅜	1 0	—	0 17 0	300,000	Burmah	Suffolk House, E C.
ChampionReef...*G*	3⅛ 3⅝	3⅛	1 0	2/- Aug. '94	1 0 0	200,000	India	6-7, Queen-street-pl.
Colar Central ...*G*	-/8 -/9	-/6	1 0	—	1 0 0	200,000	India	Dashwood Ho., E.C.
Coromandel..... *G*	1/8 2/6	1/8	1 0	—	0 12 6	95,000	India	6-7, Queen-st.-place.
Devâla Movar ...*G*	—	—	1 0	—	1 0 0	200,000	India	34, Nicholas-lane.
Gemming&Mining	—	—	2 0	—	1 7 6	19,594	Ceylon	183, Gresham House.
GoldFidsMysore*G*	18/- 20/-	19/-	1 0	1/- July '92	1 0 0	220,000	India	6-7, Queen-street pl.
Gold Fids Siam *G*	—	—	1 0	—	1 0 0	150,000	Siam	19, St. Swithin's-lane.
Hyderabad Dec. ..	8⅝⅛ 8⅝⅛	—	10 0	—	10 0 0	115,000	Deccan	16, St. Helen's-place.
Kempinkote GdFd	2/6 3/-	3/-	0 5	—	0 3 6	665,473	India	6-7, Queen-st.-place.
Mysore ..... *G*	2⅝⅛ 2⅞⅛	2¾	1 0	2/- July, '94	1 0 0	250,000	India	6-7, Queen-street pl.
My. Harnhalli ...*G*	2/- 2/6	1/9	1 0	—	0 18 0	100,000	India	2, East India Avenue
Mysore Reefs ...*G*	4/8 5/6	4/6	1 0	—	1 0 0	134,788	India	6-7, Queen-street-pl.
Mysore West(N)*G*	9/- 10/-	9/-	1 0	—	0 18 0	127,408	India	Dashwood Ho., E.C.
Mysore Wynaad *G*	8/8 9/8	8/-	1 0	—	0 18 0	250,000	India	Dashwood Ho., E.C.
Nine Reefs .....*G*	3/3 3/9	3/6	0 10	—	0 10 0	50,000	India	6-7, Queen-street-pl.
Nine Reefs	2/9 3/3	3/-	0 10	—	0 9 6	200,000	India	6-7, Queen-street-pl.
Nundydroog..... *G*	1⅜ 1¾	1⅝	1 0	1/- Mar. '94	1 0 0	200,000	India	6-7, Queen-street-pl.
Ooregum (Dt.O.)*G*	2⅞ 3⅛	3	1 0	4/6 July, '84	1 0 0	145,000	India	6-7, Queen-street-pl.
Do. (10 % Pref.).	3¾ 4	3¾	1 0	4/- July, 94	1 0 0	95,536	India	6-7, Queen-street-pl.
Do. (10 % Pref.).	3 3¼	3	1 0	4/- July '94	0 5 0	24,464	India	6-7, Queen-street-pl.
rahang Gurpn. *T*	8/6 9/-	8/6	1 0	15% Apr. '89	1 0 0	203,070	Malay Penin.	Blomfield Ho., E.C.
Pahang Kabang *T*	⅛⅛ ⅜⅛	⅛⅛	1 0	—	1 0 0	394,760	Malay Penin.	4a, Jeffrey's sq., E.C.
South E. Mysore*G*	3/6 4/-	3/6	0 4	—	0 4 0	134,623	India	6-7, Queen-street-pl

NORTH AMERICAN MINES.

Alaska Mexican...*G*	1¾ 1⅜	1¾	$5	—	$5	160,000	Alaska.....	30, St. Swithin's-ln.
Alaska Treadwell*G*	3⅜ 3⅞	3⅜	$25	1/6 Oct., '94	$25	200,000	Alaska.....	30, St. Swithin's-ln.
Almada and T... *S*	⅛	⅛	2/6	—	0 2 6	351,008	Mexico	6, Queen-street-place
American Belle...*S*	⅛⅛ ⅜⅛	⅛⅛	5 0	-/6 Mar. '91	1 0 0	398,890	Colorado	25A, Old Broad-street
Anglo Mexican ...*S*	—	—	5 0	3/- Jan. '90	5 0 0	74,850	Mexico	23, College Hill.
Arizona (Pref.) Cu	8/9	8/6	4 0 0	—	4 0 0	158,920	Arizona	74, Geo.-st , Edinbor'
Do. 10 % Deben.	59	59	100 0	7% May '94	100 0 0	2,660	Arizona... ...	74, Geo.-st., Edinbor'
Big Creek ..... *Ay.*	2/6 3/-	2/6	1 0	1/- Dec. '91	1 0 0	50,000	Nevada	2, Pancras-lane, E.C.
California ..... *G*	—	—	0 10	-/6 May '90	0 8 9	129,571	Colorado	8t. George's Ho. E.C.
Canadian Phos. *P*	—	—	1 0	-/6 Nov.'90	1 0 0	73,334	Canada	155, Fenchurch-st.
Colorado Boy.....*S*	—	—	1 0	—	1 0 0	112,491	Colorado	Abchurch-chbrs, E.C
Cortez .....*S*	—	—	1 0	3 % Feb. '93	1 0 0	300,000	Nevada	Suffolk House, E.C.
Decatur.....*S.*	—	—	1 0	—	1 0 0	32,500	Colorado	35, Queen Victoria-st.
Do..... (Pref.)	—	—	1 0	—	1 0 0	12,500	Colorado	35, Queen Victoria-st.
De Lamar.....*GS*	22/- 23/-xd	22/-	1 0	1/- Oct., '94	1 0 0	400,000	Idaho	6, Draper's-gardens.
Dickens Custer*GS*	-/4½ -/7½	-/4½	1 0	—	0 19 9	420,000	Idaho	Winchester Ho. E.C.
Elkhorn .....*S*	12/- 13/-	12/-	1 0	1/- Sept. '94	1 0 0	175,007	Montana	6, Draper's-gardens.
Emma .....*S*	-/3 -/8	-/3	0 5	—	0 5 0	403,618	Utah	15, Geo-st, Mansn. Ho
Flagstaff .....*S*	-/6 1/-	-/6	1 0	—	0 18 3	240,000	Utah	Dashwood Ho.. E.C
Fisk.....*G*	—	—	1 0	6d May, 9	1 0 0	134,000	Colorado	5, Fenchurch st.
Garfield ... . *GS*	—	—	1 0	-/6 Dec. '88	0 19 6	98,185	Nevada	Suffolk House, E.C.
Golden Feather *G*	5/- 6/-	5/6	1 0	—	1 0 0	180,000	California ...	8, Stephens Go E C.
Golden Gate ..... *G*	3/- 4/-	3/-	1 0	—	0 19 6	79,600	California ...	8, Stephens Go E.C.
Golden Leaf..... *G*	3/- 3/6	3/6	1 0	—	1 0 0	200,259	Montana	8, Draper's Gardens.
Golden Valley...*G*	—	—	1 0	—	1 0 0	55,507	Colorado	15, Angel Court.
Harquahala..... *G*	5/6 6/6	5/6	1 0	-/6 Oct., '94	0 0 0	300,000	Arizona	6, Draper's Gardens.
Ho'comb Valley *G*	-/6 -/9	-/6	0 5	—	0 5 0	540,000	California ...	14, Cornhill, E.C.
Idaho..... .....*GS*	1/9 2/3	1/9	0 5	—	0 4 8	143,439	Idaho	140, Leadenhall-st.
Jackson Goldfields	-/3 -/9	-/3	5 0	—	0 5 0	408,635	California	11, Poultry, E.C.
Jay Hawk .....*G*	3/6 4/6	3/-	1 0	-/6 Dec. '92	1 0 0	285,000	Montana	Dashwood House,
Kohinoor "B"*GS*	—	—	1 0	-/6 June.'81	1 0 0	112,901	Colorado	Blomfield Ho., E.C.
La Plata.....*S*	-/3 -/6	-/3	0 5	1/3 Oct. '82	0 4 3

"THE MINING JOURNAL" SHARE LIST—(Continued).

SOUTH AND CENTRAL AMERICAN MINES—(*Continued*).

Name.	Closing Price, Oct. 26, 1894	Closing Price, Oct. 19, 1894.	Par.	Latest Dividend.	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
			£ s.		£ s. d.			
Santa Barbara ...*G*	—	—	0 10	1/3 Dec. '88	0 10 0	80,000	Brazil.....	Liverpool
Santa Elena .....*N*	1 1⅛	1⅛	5 0	5/- Oct. '94	5 0 0	22,000	Tarapaca	3, Gracechurch-st.
Santa Rita .....*N*	3⅞ 4⅛	4	5 0	15% Apr., '94	5 0 0	20,000	Chili	DashwoodHouse,E.C
San Sebastian ...*N*	2⅜ 2⅝	2⅜	5 0	1/6 May '94	5 0 0	29,000	Chili	DashwoodHouse.E.C
Segovia .....*G*	—	—	5 0	—	0 4 0	160,000	Colombia	5, Copthall-buildings
S ere Pref.....*G*	—	—	1 0	10% July '94	0 15 0	840	Colombia	23, St. Swithin's ln.
Sucre Ord.....*G*	—	—	1 0	8% July '94	1 0 0	10,000	Colombia	23, St. Swithin's ln.
Tetuan .....*G*	—	—	1 0	—	0 19 6	200,000	Colombia	5, Copthall-buildings
Tolima "A" .....*S*	8½ 9	8½	5 0	10% Aug. '94	5 0 0	14,000	Colombia	18, Finsbury-circus.
Do. " B" .....*S*	7⅛ 8	7⅛	5 0	10% Aug. '94	5 0 0	6,000	Colombia	18, Finsbury-circus.
Vic. & Altamira ...	—	—	0 5	—	0 5 0	200,000	Venezuela ...	Broad-st. Avenue.
West Indian.....*G*	—	—	0 5	—	0 5 0	700,000	San Domingo	49, Queen Victoria-st.
Zaruma .....*G*	—	—	0 5	—	0 5 0	261,422	Ecuador.....	1, Gt. Winchester-st.

AFRICAN MINES.

Afrikander .....*G*	1¾ 1¼	1⅜	1 0	—	1 0 0	40,000	Transvaal	19, St. Swithin's-lan
Agnes Block.....*G*	10/- 12/-	10/-	1 0	—	1 0 0	78,507	Transvaal	54, Old Broad-street
Alexandra Estate*G*	5/6 6/6	6/-	1 0	—	1 0 0	225,000	Witwatersrd.	Warnford Court, EC
Appantoo.....*G*	— —	—	1 0	—	1 0 0	71,000	West Coast ...	9, New Broad-street
Aurora.....*G*	11/- 12/-	10/6	1 0	5% Mar, '93	1 0 0	65,000	Witwatersrd.	8, Old Jewry.†
Balkis Eersteling*G*	-/3 -/6	-/4½	0 10	—	0 9 6	520,000	Transvaal	85, Gracechurch-st.
Balkis Land .....*G*	1/9 2/3	1/9	0 10	—	0 10 0	520,000	Transvaal	85, Gracechurch-st.
Banket.....*G*	-/6 1/-	-/6	1 0	—	1 0 0	200,000	Witwatersrd.	Johannesburg.
Bantjes Reef .....*G*	15/- 16/-	14/-	1 0	—	1 0 0	83,000	Witwatersrd.	Warnford-court.†‖
Barrett.....*G*	3/3 3/9	3/3	0 10	—	0 9 0	207,495	De Kaap	17, Basinghall-street
Bechuanaland Exp	24/6 25/6	1/3⅛	1 0	—	1 0 0	200,00	Bechuanaland	19, St. Swithin's-lane
Block "B" Lang.	7/6 8/6	7/6	1 0	—	1 0 0	535,000	Witwatersrd.	8, Princes-st , E.C.‖
Booysen Land .*G*	15/- 17/6	9/-	1 0	—	0 11 0	95,000	Transvaal.....	4, Tokenhouse-bldgs
Do. Pref.....	— —	—	1 0	8% Mar., 94	0 10 0	71,174	Transvaal.....	4 Tokenhouse-bldgs.
Brit. S. A. Char. ...	36/- 37/-	35/-	1 0	—	1 0 0	2,000,000	S. Africa	19, St. Swithin's-lane
Buffelsdoorn ..... *G*	31/- 32/-	30/-	1 0	—	1 0 0	250,000	Potchefstroom	8, Old Jewry.
Buluwayo Synd. ..	1 1¼pm	1	1 0	—	1 0 0	12,000	Matabeleland	10, Helen's Place.
Cape Copper .....*C*	1⅞ 1⅞	1⅞	2 0	1/3 June '94	2 0 0	300,000	Cape Colony	9, Queen-street-place,
Do. 6 % Pref,	1⅞ 2⅛	1⅞	2 0	1/3 June '94	2 0 0	48,000	Cape Colony	9 Queen-street-place.
Cen. Montrose... *G*	1/- 2/-	1/-	1 0	—	0 18 6	69,000	Transvaal ...	15, George st. Mn. Ho.
Champ d'Or ..... *G*	2¾ 2⅞	2⅛	1 0	—	1 0 0	116,016	Witwatersrd.	8, Old Jewry, E.C.
Champ d'Or Deep*G*	22/- 23/-	20/6	1 0	—	1 0 0	275,000	Witwatersrd.	Fox st., Johannesbrg
City and Suburb.*G*	15½ 15¾	15⅛	1 0	25% Mar. '94	1 0 0	75,000	Witwatersrd.	1, Crosby Square.†
Coetzeestroom ...*G*	1/- 1/6	1/-	0 5	—	0 5 0	140,000	De Kaap	105, Leadenhall-street
Con. Buitfontein *D*	26/8 27/6	26/6	1 0	5% Nov. '89	1 0 0	721,500	Griqualand W	62, Lombard-st.
Con. Deep Levels*G*	2¼ 2⅝	2¼	1 0	4/- June '94.	1 0 0	187,250	Transvaal	30, St. Swithin's-lane.
Con. G. Fields S A	2⅝ 2¾	2⅝	1 0	15% Nov. '94	1 0 0	2?0,00	S. Africa	8 Old Jewry.
Do. 5½% Deben	10¼ 103½	102	5 0	5½ July, '94	5 0 0	6 0,000	S Africa	8, Old Jewry.
Crown Reef .....*G*	8⅜ 8⅝	8⅞	1 0	25% May '94	1 0 0	120,000	Witwatersrd.	120, Bishopsgt st Wn‖
De Beers Consol. *D*	17½ 17¾	17⅛	5 0	12/6 June '94	5 0 0	789,791	Transvaal	62, Lombard-street.
Do. 5½% 1st Deb..	104 105	104	100 0	5½% Feb. '94	5 0 0	£1,875000	Transvaal	62, Lombard-street.
Do. 5½% Bul. Ob	102 103	102	00 0	5½% Oct. '94	5 0 0	£720,100	Transvaal	62, Lombard-street.
Durban Roodept.*G*	5½ 5¾	5⅝	1 0	3/- Sept. '94	1 0 0	£125,000	Witwatersrd.	28, Leadenhall-bldgs
East Rand.....*G*	23/6 24/6	20/-	1 0	—	1 0 0	570,000	Witwatersrd.	170, Winchester-ho.
Evelyn .....*G*	— —	—	1 0	10% Jan. '89	1 0 0	66,000	Witwatersrd.	28, Old Jewry, E.C
Exploration	1¾ 1⅜	1¼	1 0	1/- Dec. '93	0 4 0	140,000	S. Africa	30, S. Swithin's-ln.†
Exploring Co.	4½ 4¾	4⅛	1 0	25/- Feb. '94	1 0 0	69,350	S. Africa	19, S. Swithin's-ln.
Ferreira .....*G*	9⅞ 10⅛	9⅞	1 0	100% June '94	1 0 0	45,000	Witwatersrd.	120, Bishopsgt st. Wn‖
Forbes Reef (Nw)*G*	4/- 5/-	4/-	1 0	—	0 19 0	105,000	De Kaap	45-6, Leadenhall-st.
Geldenhuis Deep*G*	5⅛ 5¾	5⅜	1 0	—	1 0 0	265,000	Transvaal	30, St. Swithin's-lane.
Geldenhuis Est. *G*	5⅛ 5¾	5¼	1 0	10% Sept. '94	1 0 0	187,500	Witwatersrd.	120, Bishopsgt st. Wn‖
Do. Main Reef	19/- 20/-	18/-	1 0	—	1 0 0	150,000	Witwatersrd.	Warnford-court, E.C.†
George and May *G*	17/6 20/-	17/6	1 0	—	—	112,750	Witwatersrd.	Warnford Court, E.C
George Goch .. *G*	— —	—	1 0	—	1 0 0	100,000	Witwatersrd.	Johannesburg.
Glencairn .....*G*	46/- 47/-	40/6	1 0	5 p c Aug. 94	1 0 0	200,000	Witwatersrd.	2, Drapers-gardens.
Gold Estates T. *G*	3/6 4/6	3/6	1 0	15% Dec. '89	0 10 0	130,000	Transvaal	46, Queen Victoria-st
Gld. Fis. Deep...*G*	17⅛ 1⅝	17⅛	1 0	—	1 0 0	600,000	S. Africa	8 Old Jewry.
G. F. of Mashonld.	7/6 10/-	7/6	1 0	—	1 0 0	200,000	Mashonaland	19, St. Swithin's-ln.
G.F.Tierrad' Fuego	2/9 3/3	2/9	0 4	—	0 4 0	400,000	Mosambique...	2, Fokenhouse Bldgs.
Grahamstown . *G*	10 6 11/6	11/-	1 0	—	1 0 0	150,000	Witwatersrd.	14, Throgm rton-st
Graskop ..... *D*	1/3 1/9	1/3	0 5	7½% Mar. '93.	0 5 0	500,000	Lydenburg ...	85, Gracechurch-st.
Griqualand W....*D*	6¾ 7	6¾	10 0	4% March '94	10 0 0	105,700	Transvaal	62, Lombard-street
Henry Nourse ...*G*	4 4⅛	3⅞	1 0	—	1 0 0	100,000	De Kaap	Warnford-court.
Joe's Reef ..... *G*	7/- 8/-	6/6	1 0	—	1 0 0	57,404	De Kaap	21, Mincing Lane.
Johannesburg Pnr	3⅞ 4⅛	3¾	1 0	12½% Nov.,'93	1 0 0	2,000	Witwatersrd.	Johannesburg.
Jubilee .....*G*	6¼ 6½	5⅞	1 0	30% Oct. '94	1 0 0	20,000	Witwatersrd.	8, Old Jewry.†
Jumpers .....*G*	5⅛ 5⅜	5⅜	1 0	30% June '94	1 0 0	100,000	Witwatersrd.	120, Bishopsgt st, Wn‖
Kimberley .. ..*D*	⅛dis⅛pm	par.⅛	1 0	—	0 10 0	98,672	Kimberley ...	19, Finsbury circus.
Kimberley Rdpt...	12/6 13/6	11/-	1 0	—	1 0 0	125,000	Kimberley ..	2, Drapers-gardens.
Kleinfontein (N)*G*	2⅝ 2¾	2⅜e	1 0	—	1 0 0	150,000	Witwatersrd.	8, Old Jewry.
Klerksdorp New*G*	2⅛ 2/9	1/6	0 10	—	0 10		Transvaal	110, Cannon-street.
Koffyfontein.....*D*	9⅛ 1⅛e	9⅛	1 0	—	0 5 0	50,000	Jacobsdaal ...	4, Bishopsgate street

AFRICAN MINES—(*Continued*).

Name.	Closing Price, Oct. 26, 1894	Closing Price, Oct. 19, 1894.	Par.	Latest Dividend.	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
			£ s.		£ s. d.			
Langlaagte Est. *G*	3¾ 4	3⅝	3 0	2/- Oct. '94	1 0 0	467,000	Witwatersrd.	59, Holborn Viaduct.†
Do. Royal	3⅛ 3⅜	3	1 0	5% Sept. '93	1 0 0	100,00	Witwatersrd.	2, Drapers-gardens.†
Lisbon-Berlyn .. *G*	2/- 2/6	2/-	2/6	—	0 2 6	689,233	Lydenburg ...	110, Cannon-street.
London & S. A. Ex.	10¾ 10¾	10¾	0 10	2/6 Sept. '94	0 10 0	100,0 0	S. Africa	19, Finsbury-circus.
Luipaards Vlei Est.	10/8 11/6	11/-	1 0	6% Mar, '90	1 0 0	319,093	Witwatersrd.	Warnford-court.‖
Do, do. do.	⅝ ¾	⅝	1 0	—	0 10 0	25,000	Witwatersrd.	8, Old Jewry.
Main Reef (New)*G*	7/6 8/6	7/6	1 0	—	0 10 0	300,000	Witwatersrd.	8, Old Jewry.
May Con. (New) *G*	1⅝ 1⅝	1⅝	1 0	—	1 0 0	430,000	Witwatersrd.	4, Lothbury.‖
Mashon. Agency...	1 1⅛	1	1 0	—	0 10 0	100,000	Mashonaland	8, Old Jewry, E.C.
Mashon. Central...	— —	—	1 0	—	1 0 0	200,000	Mashonaland	8, Old Jewry, E.C.
Matabeleland	— —	—	12/6	—	0 12 6	79,389	Matabeleland	73, Basinghall St, E.C.
Metropolitan (N) *G*	1⅝ 1⅝	1	1 0	—	1 0 0	75,000	Witwatersrd.	1, Crosby Square.†
Meyer & Chari....*G*	6¼ 6½	6⅜	1 0	25% June '94	1 0 0	71,887	Witwatersrd.	Warnford-court.†
Mines Trust	⅝ ¾	⅝	1 0	3% May '94	1 0 0	82,774	So. Africa	130, Winchester Ho.
Modderfontein.. *G*	3½ 3¾	2⅞	1 0	—	1 0 0	200,000	Witwatersrd.	Warnford-court.†
Montrose..... *G*	⅝ ¾	⅝	1 0	3/- Feb. '90	1 0 0	70,000	De Kaap	65, New Broad-street
Moodies G.&E....*G*	9/- 10/-	9/6	1 0	-/4 May '90	1 0 0	240,000	De Kaap	8, Old Jewry.†
Mozambique.....	11/3 13/9	12/6	1 0	—	1 0 0	400,000	S E. Africa ...	Broad-street House.
Namaqua .....*C*	18/9 21/3	⅜	2 0	2/6 July '91	2 0 0	194,331	Namaqualand.	34, Leadenhall-bldg.
New Aurora West*G*	8/6 9/6	7/-	1 0	5% Mar., '93	—	30,000	Witwatersrd	1, Crosby Square.†
New Black Reef ...	2/- 3/-	2/-	1 0	—	1 0 0	76,000	Witwatersrd.	9, King William st.‖
New Chimes..... *G*	2⅛ 2⅜	2⅛	1 0	5% Oct., '94	1 0 0	70,000	Witwatersrd.	8, Old Jewry, E.C.
New Clewer Estate	1⅛ 1⅜	1⅛	1 0	—	1 0 0	100,000	Lydenburg ...	120, Bishopsgt st, Wn‖
New Crœsus..... *G*	1⅛ 1⅜	1⅜	1 0	5 % Aug. '92	1 0 0	195,000	Langlaagte ..	4, Bishopsgt.-st. Wt.
New Edwin Brav	3/- 4/-	4/6	7 0	—	7 0 0	65,000	D- Kaap	23, College Hill
New Gordon.....*D*	2/- 3/-	2/-	1 0	5% Dec. '89	1 0 0	500,250	Griqualand ..	110, Cannon-street.
New Heriot .....*G*	5¼ 5½	5¼	1 0	20 p c Sept 94	1 0 0	195,000	Witwatersrd.	1, Crosby Square.†
New Jagersf. ....*D*	15 15¼	14¾	10 0	5% Sept., '94	10 0 0	100,000	Transvaal	5, Copthall-buildings
New LouisD'Or...*G*	6/9 7/3	7/3	1 0	—	1 0 0	100,000	Witwatersrd.	53, New Broad-street
New Primrose ...*G*	4⅜ 4⅞	4⅜	1 0	20% July '94	1 0 0	230,000	Witwatersrd.	2, Draper's-gardens.
New Rietfontein*G*	2¼ 2⅝	2½	1 0	—	1 0 0	160,000	Witwatersrd.	Warnford-ct., E.C.
New S.Augustine*D*	-/7⅛ -/10½	-/7½	1 0	—	0 19 0	234,583	Griqualand W	30-1, St, Swithin's-ln
New Salisbury ...*G*	2⅞ 3⅛	2⅝	0 10	—	1 0 0	93,000	Witwatersrd.	1, Crosby-square.†
New Spes Bona ...	9/- 10/-	9/-	1 0	—	1 0 0	113 801	Witwatersrd.	24, N John-st., Lpl
N. Ophir Concess.	1/6 2/-	1/9	1 0	—	0 18 6	111.857	E. CoastAfrica	31, Lombard-street.
New Virginia ...*G*	3/9 4/3	3/6	0 10	—	0 10 0	48,335	Transvaal	26, Budge-row, E.C.
Nigel ..... *G*	3¾ 3⅞	3½	1 0	15% Sept. '94	1 0 0	160,000	Witwatersrd.	1, Crosby-square.
Nooitgedacht E. *G*	— —	—	1 0	—	1 0 0	180,000	Lydenburg ..	8, Old Jewry.
Oceana	1⅛ 1⅛	1⅛	1 0	25/- Nov. '89	1 0 0	150,000	Transvaal	4, Sun Court, E.C.
Oceana Develpmnt	¼ dis par	¼dispar	1 0	—	0 5 0	50,000	Transvaal	4 Sun Court, E C.
Orange F.S.E. ...*D*	3½ 4	3⅜	1 0	1/- Sept., '94	1 0 0	284,000	OrangeF.State	10, Moorgate-street.
Orion..... *G*	3 3½	2⅞	1 0	10% Aug. '94	1 0 0	30,000	Witwatersrd.	10, Basinghall-street
Otto's Kopje.....*D*	2/6 3/-	2/9	1 0	—	0 19 3	437,888	Kimberley ...	112, Cannon-st.,E.C.
Paarl Central ... *G*	23/- 24/-	22/6	1 0	—	1 0 0	138,750	Transvaal	120, Bishopsgt st, Wn‖
Paarl Ophir ..... *G*	— —	—	1 0	10p.c. Aug.'94	1 0 0	12 000	Twefontein ...	Cape Town
Pardy's Mozambq.	— —	—	0 10	10p.c. Apr. 94	0 10 0	13,000	S. E. Africa ..	Broad St. Avenue.
Piggs Peak, New *G*	3/- 4/-	3/-	1	—	0 17 0	230,326	Swaziland ..	6, Queen-street-place
Potchefstoom ... *G*	5/6 6/6	4/6	1 0	—	1 0 0	161,000	Potchefstroom	19, Bury-st., E.C.
Princess Estate *G*	1⅜ 1⅛	1⅛e	1 0	—	1 0 0	72,046	Witwatersrd.	33, Cornhill, E.C.
Randfontein .....*G*	13/- 14/-	13/6	1 0	—	1 0 0	1,916,500	Witwatersrd.	59, Holborn Viaduct.†
Rand Mines ..... *G*	15½ 16	12¾	1 0	—	1 0 0	332,7 8	Witwatersrd.	120, Bishopsgt st, Wn‖
Read's Drift .....*D*	16/3 18/9	17/6	1 0	—	—	5 ,000	Transvaal	19, Finsbury circus.
Robinson ..... *G*	6⅞ 7⅛	6⅞	5 0	5% Aug. '94	5 0 0	543,750	Transvaal	55, Holborn Viaduct.‖‖
Roodepoort Un. *G*	3¼ 3⅜	3⅜	1 0	10p.c.Aug. '94	1 0 0	100,000	Witwatersrd.	Warnford-court.†
Sheba .....*G*	27/6 28/6	27/6	1 0	1/- Sept. '94	1 0 0	614,450	Lydenburg ..	85, Gracechurch-st.
Sliati .....*G*	2/6 3/-	2/6	1 0	—	0 17 6	625,00	Zoutpansberg	4, Sun Court, E.C.
Simmer & Jack....*G*	8½ 8¾	9¼	1 0	10% May '94	1 0 0	85,000	Witwatersrd.	33, Cornhill.
Do New	— —	—	6 0	—	6 0 0	45,000	Witwatersrd.	33, Cornhill.
S.A. Gold Trust	1¾ 1⅞	1⅝e	1 0	15% Nov. '94	1 0 0	220,000	South Africa.	8, Old Jewry.
S.Simmer & Jack *G*	2⅛e 2⅛e	2⅛e	1 0	—	1 0 0	12 ,000	Witwatersrd	31, Lombard-st., E.C.
Spitzkop (New) *G*	11/- 12/-	12/-	1 0	—	0 19 6	99,750	Lydenburg ...	15, Bishopsgt-st, Wt.
Stanhope ..... *G*	2 2½	2	1 0	50% Sept. '94	—	34,000	Witwatersrd.	1, Crosby Square.†
Sutherland R. ...*G*	13/6 14/6	1-/-	1 0	—	0 18 6	220,000	Zoutpansberg	3, Budge-row, E.C.
Teutonia.....*G*	12/- 13/-	11/-	1 0	—	1 0 0	96,000	Witwatersrd.	8, Old Jewry.
Trans. Coal Trust...	13/6 14/6	13/6	1 0	1/- Sept. '94	1 0 0	439,965	Witwatersrd.	15, Angel-court, E C
Thistle Reef ..... *G*	-/6 1/-	-/6	0 8	—	0 4 0	150,000	Barberton	Broad-st. House, E.C
Trans. Coal Trust...	9/0 10/-	9/6	1 0	—	1 0 0	285 70C	Transvaal	76, Old Broad-st E C.
Trans. Gold .....*G*	2¹³⁄₁₆ 2¹⁵⁄₁₆	2¹³⁄₁₆	1 0	1/- June '94	1 0 0	250,000	Transvaal	Suffolk House, E.C.
Trans. Land.....	5/6 6/6	5/-	1 0	—	1 0 0	79,915	Transvaal	Suffolk House, E.C.
Trans. Land.....	1/- 2/-	2/-	1 0	—	0 15 0	169,999	Transvaal	33, Cornhill.
Treasury.....*G*	— —	—	1 0	7½% May '94	1 0 0	26,000	Witwatersrd.	Johannesburg.
Turffontein Est. ..	— —	—	1 0	2½ Jan. 94	1 0 0	40,007	So. Africa	130, Winchester Ho.
Un. Ivy Reef.....*G*	15/- 17/6	15/-	1 0	2½ Jan. '94	1 0 0	45,000	Transvaal	110, Cannon-street
Un. Langlaagte *G*	10/- 12/6	10/-	1 0	—	1 0 0	100 000	Witwatersrd.	23, St. Swithin's-ln.
Van Ryn ..... *G*	2⅝ 2¾	2⅝	1 0	—	1 0 0	99,810	Witwatersrd.	1, Crosby-square.†
Victory Hill .....*G*	— —	—	1 0	—	1 0 0	108,000	De Kaap	Portland House, E.C.
Village Main Reef	4⅛ 4⅜	3⅞	1 0	—	1 0 0	137,00	Witwatersrd.	8, Old Jewry.
Wassau .....*G*	— —	—	1 0	—	1 0 0	100,000	Gold Coast ..	147, Cannon-street.
Wemmer .....*G*	4⅞ 5⅛	5	1 0	10% Nov. '91	1 0 0	55,000	Witwatersrd.	19, Bury-street,††
Witwatersrand *G*	31/6 32/6	30/6	1 0	—	1 0 0	250, 00	Witwatersrd.	19, Bury-st., E.C.
Wolhuter .....*G*	3⅛ 3⅛	3⅛	1 0	—	1 0 0	120,000	Witwatersrd.	Warnford-court,†
Wolverand.....*G*	⅝ ⅜	⅝	1 0	2/- Apr., '94	1 0 0	18,750	Transvaal	5, Copthall buildings
Wolverand.....*G*	— —	—	0 18 0	—	0 18 0	39,021	Transvaal	5, Copthall buildings
Worcester .....*G*	2⅞ 3⅛	2¾	1 0	10% Oct. '94	1 0 0	90,727	Witwatersrd.	8, Old Jewry.†
Zambesia Explora.	2½ 2¾	2½	1 0	—	1 0 0	45,000	Transvaal	13, George-st., E.C.

COAL, IRON, AND MISCELLANEOUS COMPANIES.

Name.	Closing Price, Oct. 26, 1894	Closing Price, Oct. 19, 1894.	Par.	Latest Dividend.	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
			£ s.		£ s. d.			
African Gold Recv	1⅛ 1⅜	2	1 0	10 p c Oct. 94	1 0 0	175,000		23, College Hill, EC
Albion Steam	1⅛ 1⅛	11	10 0	10 p c Feb. 94	10 0 0	22,000	Pontypridd ..	6, Crosby-sq., E C.
Aluminium, "A "	1⅜ 1⅝	1⅛	1 0	5% Oct. 94	1 0 0	60,000		13, Abchurch Lane
Andrew Knowles..	11¾ 12⅛	11¾	50 0	14s Mar. 94	25 0 0	24,400	Pendlebury ...	Pendlebury, nr Man.
Do do	27 31	27	50 0	7/6 July 94	50 0 0	600	Pendlebury ...	Pendlebury, nr Man.
Do Mort. Debts.	103 105	103	100 0	5 p c July 94	100 0 0	£125,000	Pendlebury .	Pendlebury, nr Man.
Arniston.	24⅛	24⅛	10 0	25s May 94	8 0 0	6,5 0	Arniston	10, S. Andw-sq Edin.
Ashbury Carr, Co.	16 19	19	50 0	2s/- Oct. 92	50 0 0	3,000		Openshaw, M n.
Do do	1¾ 1¾	1⅝	11 0	3/3 Oct. 92	6 10 0	9,822		Openshaw, Man.
Aus. Gold Recovry	¾ ⅞	¾	1 0	...	1 0 0	160,000		23, College Hill, EC
Barrow Hem. Ord.	1¾ 2⅛	1¾	7 10	3/9 April 94	7 10 0	150,000	Barrow-in-Fur	10, S. Swithin's-lane
Do 6 p.c. Pref. ..	4¾ 5¾	4¾	7 10	4/6 April 94	7 10 0	50,00	Barrow-in-Fur	10, S. Swithin's-lane
Boickow Vaughan	11⅛ 12	11⅜	20 0	10s Mar. 94	20 0 0	81,488	York&Durhm.	16, Philpot-lane,
Do do	6 6⅝	6	20 0	6s Mar. 94	12 0 0	93,045	York&Durhm	16, Philpot-lane,
Do 5 p. c. Pref.	21 21½	21⅛e	20 0	5 p c Feb. 94	20 0 0	23,604	York&Durhm	16, Philpot-lane,
Cairntable	8¾	8¾	10 0	0 p c Dec. 93	10 0 0	6, 38	Scotland	103, Welling-st, Glas
Calderbank Steel&c	10	10	10 0	2½ Oct. 91	10 0 0	15,000	Near Glasgow	63, Vincent-st., Glas
Do 6 p c Pref ...	47/3	47/3	10 0	6 p c Oct. 91	10 0 0	1 ,000	Near Glasgow	63, Vincent st., Glas
Cassel Gold Extng	18/ 19/	16/-	1 0	7½% Dec. 93	1 0 0	168,0 0		108A, Hope st., Glas
Do 3rd Issue ...	13/-	7/9	1 0	...	0 15 0	30,000		108A, Hope st , Glas
Consett Iron.....	21¼ 22⅛	21⅝	10 0	9s July, 94	7 10 0	1'0,000	Durham	Consett, Co. Durham
Do 8 p. c. Pref	10 10½	10	5 0	4s July, 94	5 0 0	100,000	Durham	Consett, Co. Durham
Cowdenbeath	15	15	10 0	15 p c Aug. 94	8 10 0	15,000	Fife.....	Cowdenbeath, Fife.
Do 5 p. c. Pref	11⅜	11⅜	10 0	5 p c Feb 94	10 0 0	1 ,000	Fife.....	Cowdenbeath, Fife
D. Davis and Sons	13¾ 13⅝	13¾	10 0	10 p c Aug. 94	10 0 0	45,000	Rhondda	138, Leadenhall-st.†
Ebbw Vale.....	8½ 9	8½	23 0	10s June 94	20 0 0	69,754	South Wales...	122, Cannon-street†
Do do	10½ 11	10½	23 0	10s June 94	23 0 0	4,721	South Wales..	122,Cannon street†
Fife Coal	29¾	29¾	10 0	3 p c Aug. 94	9 0 0	12,000	Fife.....	Leven, Fifeshire.
Fraser & Chalmers	7⅞ 1⅜	7⅞	5 0	4/- Oct. 91	5 0 0	105 00		43, Threadneedle st.
Gen. Mining Assoc	5 5¼	5	5 10	15/- Apr. 94	5 10 0	27 469	Nova Scotia ...	Blomfield House, EC
Great Western (A)	8¼ 8¾	8¼	5 0	6 p c Mar. 94	5 0 0	10,000	Pontypridd ...	35, W Bute-st., Cardff
Do do (B)	4½ 5 xd	4½	5 0	10 p c June 94	5 0 0	50,000	Pontypridd ...	35, W. Bute-st. Cardff
Great Wyrley	120	140	100 0	...	100 0 0	600	Great Wyrley	Gt. Wyrley, Walsall
Hamstead	22⅛	22⅛	20 0	10/- Aug. 94	20 0 0	5,000	Great Barr ...	Gt. Barr, nr. Birm.
Do 7½ p c Pref.	33 34	32½	20 0	15/- Aug. 94	20 0 0	5,000	Great Barr ...	Gt. Barr, nr. Birm.
Henry Briggs (A)	14 14½	14	15 0	18/9 Aug. 94	12 10 0	12,965	Normanton ...	Whitwood, Yorks.
Do do (B)	10 10½	10	15 0	12/9 Aug. 94	8 10 0	11,405	Normanton	Whitwood, Yorks.
International	3 3¼ xd	3½	5 0	2¼ p c Sept 94	5 0 0	13,820	Glamorganshr	59, Mt. Strt.-sq , Cardff
J. Brown & Co. ...	16 16½	15½	20 0	7/6 July 94	15 0 0	58,00	Yorkshire	12, Fnchch-st., EC†
Do 5 p c Pref...	11¾ 11¾	11¾	10 0	5 p c June, 94	10 0 0	18,000	Yorkshire	12, Fnchch st., EC†
John Watson	12	12	10 0	12s May, 94	8 10 0	13,333	Lana k&Stirlg	23, Vincent-st., Glas
Do 6 p. c. Pref.	12½	12⅛	0 0	6 p c May 94	10 0 0	6,666	Lanark&Stirlg	123, Vincent st., Glas
Lofthouse	6⅞ 7⅛	6⅞	4 0	...	3 0 0

REPORTS FROM THE MINES.

We find it necessary to announce that, owing to the vast numbers of mines, reports, and items of mining intelligence which reach us invariably very late—up to, and frequently after the time of going to press—it is impossible to guarantee the insertion of all of them in the issue in which, in ordinary course they should appear. We always endeavour, however, to make this important feature as complete as possible, and if the secretaries of mining companies, mining captains, and others would kindly make an effort to let their reports, etc., reach us early on Fridays, when it is not possible to let us have them earlier in the week, their doing so would go far to ensure their insertion, and to promote the completeness of our Mining Intelligence.

BRITISH MINES.

DEVON GREAT CONSOLS.—William Clemo, October 25: Watson's engine shaft. In the 172 fathom level east the lode is 4 feet wide, producing 1 ton of copper and mundic ores per fathom. In the rise in the back of the 172 fathom level east the lode is producing stones of copper and mundic ores. In Harvey's winze sinking below the 160 fathom level east the lode is 4 feet wide, yielding 2 tons of ores per fathom. In the 148 fathom level east the lode is 4 feet wide, yielding 2 tons of ores per fathom. In the 148 fathom level east the lode is 4 feet wide, producing 1 ton of copper and mundic ores per fathom. Other points of operation continue to yield the usual returns of copper and mundic ores throughout the mines.

DRAKEWALLS.—M. Bawden, October 23: In my last we reported that the engine shaft had been sunk to the 190, and we commenced driving the crosscut south to intersect the lode. We have during the past few weeks made considerable progress in driving the crosscut, and are now in 10 fathoms, and have already indications that we are nearing the lode, although according to its bearing in the level above it should be some 6 or 7 fathoms still to the south. The men in the deep adit west have driven through the ground standing north between that level and south gunn's, and have crossed this gunnis and driven through to the north gunnis, where the surface water is coming down in several large streams, and has been up to this, finding its way to the 90 at the engine shaft. This water we shall now quickly deal with, and convey it through the deep adit to the River Tamar at no further cost to the company. We sent away yesterday for sale 5¼ tons of tin for the four weeks last past, and have between 30 and 40 tons of arsenic soot for the same period, which shows that our stopes still continue very productive.

GREEN HURTH.—October 19: South-west branch vein. The underhand stope which is being driven northward from the forehead at the 22 fathom level maintains its value for lead, worth 2½ tons per fathom. West cross cut from No. 1 cross vein at 25 fathom level, last week I informed you that we had reached the south-west branch. Since that time we have risen on the vein 1 fathom, but it is diminishing in value as we rise up, worth for lead 10 cwts. per fathom. We are evidently rising at a point where the vein is poor, seeing that the ore is going down in the underhand stope on the same vein above —Annie's vein. At the south forehead we have a strong vein, but it continues poor, showing a little ore, but not sufficient to value. The heading in the back of the above level is poorer, worth 1 ton per fathom.—W. Grav.

LEADHILLS.—W. H. Paull, October 22: Brown's vein. In the 160 fathom level driving south of Wilson's shaft the vein is 4 feet wide, of a promising character, containing nice spar, and at times shews a little lead ore. In same level driving north of Jeffrey's shaft the vein is 4 feet wide, composed chiefly of stone and spar strongly spotted with lead ore. The vein in stope over the 160 south of Jeffrey's shaft is now producing 25 cwts. of lead ore per fathom. In winze sinking below the 145 south of Wilson's shaft the vein is 4 feet wide, of a kindly appearance, but unproductive. Nos. 2 and 3 stopes over the 145 north of Jeffrey's shaft will produce on an average 85 cwts. of ore per fathom. The vein in the 115 fathom level driving north of Jeffrey's shaft is over 4 feet wide, composed of dark stone and a little spar, with a dampness in forebreast. In No. 1 stope over this level, north of Jeffrey's shaft, the vein is producing 35 cwts. of ore per fathom. In the 100 fathom level driving south of Wilson's shaft the vein is 4 feet wide, letting out a little water, and contains a good mixture of spar, but the stone is rather dark. No change of note in crosscut driving east at the 100 fathom level. Nos. 1 and 2 stopes over the drift above the 100 fathom level south of Wilson's shaft are yielding respectively 35 cwts. of ore per fathom. The vein in the 85 fathom level driving south of Wilson's shaft is 3½ feet wide, soft and unproductive. In stope over this level south of ditto, the vein yields 40 cwts. of ore per fathom. The vein in stope over the 50 south of flat rod shaft is producing 50 cwts. of ore per fathom. The stope over the 35 south of ditto is yielding 25 cwts. of ore per fathom. In stope below the 35 south of flat rod shaft the vein is 5 feet wide and worth 50 cwts. of ore per fathom. Gripp's adit is being driven south on vein 4 feet wide, composed of spar, barytes, and a kindly stone spotted with lead ore. Smelting operations have been resumed after cleaning flues.

POLBERRO.—October 20: We shall finish cutting ground for the angle bob and commence fixing the bob at the 14 in a few days. The iron work for the bob and connections has been delivered on the mine. We have nearly completed cutting ground at the 26, and shall at once commence sinking below that level. The lode in the 26 east on Pink lode is of the same size as last reported, and worth £11 per fathom. There is no change on the South House lode.—(Signed) Charles Thomas, John Harper.

WHEAL FRIENDLY.—October 23: The Pink lode in the 10 fathom level east is being driven at £8 per fathom. The lode is 4 to 5 feet wide, composed of copper, mundic, and 45 lbs. of tin to the ton of stuff. The intermediate end east of rise is being driven by a full pare of men at £8 per fathom, and I am glad to state that the lode has much improved. It is 3 feet wide and producing ½ ton of tin to the fathom of ground, or worth £20 per fathom.—(Signed) Nicholas Vivian.

COLONIAL, INDIAN, AND FOREIGN MINES.

ANGLO-MEXICAN.—Writing on 14th September with regard to the gold mine at San Jose de Gracia, the manager says:—Guadalupe Tunnel. I am glad to say that satisfactory progress has been maintained in this tunnel during the past week, beyond which fact nothing of importance has occurred to call for special comment.—East latteral or footwall drift, Guadalupe tunnel. I am glad to report quite an improvement in the appearance of the face of this drift during the past week. The ore in the face is now very rich, showing very often specimens of native gold, but as yet no assays have been made. I shall have some samples taken during the coming week, and also from the vein in the new air shaft, and these will appear in next weeks' report. I am glad to say the stopes continue to look very well indeed, but we are not in a position yet to extract much of the rich ore from them, but will be in the course of a few weeks. The winzes have not been run during the past week on account of a strike among our men, by reason of which very few were to be had, but all is settled now, and I hope to resume work during the coming week at these points.

BRITISH SOUTH AFRICA COMPANY.—The following has been communicated to Reuter's Agency by the British South Africa Company:—Mashonaland (Manica district). Mining commissioner at Umtali reports on September 25:—"Mount Maggie has been inspected; 25 feet wide; work being done on both extensions.—Rezende. They are now driving least.—Revue east extension. Reef 18 inches to 2 feet wide; struck on White's block; giving very good pannings; driving at 20 feet level in a shaft south at outcrop Durrel's shaft down to 150 feet, going to 150 feet if they do not strike. Iformer reef cut at 45 feet and 62 feet; considerable quantity of visible and very good pannings driving from 85 feet in second shaft. S. G. Reef cut; 14 inches wide; pans poorly; reef cut at 30 feet level. Work being continued on Panhalanga and extension, Berlin, Braganza, Palmyra, Grand, South Rezende, Hillandale, &c."—Lo Mogundi district: Mining Commissioner, Lo Mogundi, reports September 26:—"Work still somewhat delayed by want of labour in this district. Work going on on Ayrshire, Chininga, and Shankwin (? Shankura) Extension. Inspection certificate granted on latter. They are developing Mount St. Mary's for Homan Syndicate on Delta Reef; struck at 20 feet, resembling Ayrshire, and giving very fair pannings. Reef also struck on northern end of block at 53 feet, panning well."

CHIAPAS.—Mine report for fortnight ending September 15: Providencia Aver advanced 8 feet, total 117 feet, assays 5 dwts. gold, 4 ounces 2 dwts. silver, and 2·39 per cent. copper, and 4 dwts. gold, 3 ounces 6 dwts. silver. Continues to hold its own, and in general appearance has improved though assays keep low.—Taylor No. 1 north east crosscut driven 14 feet, total 112 feet 6 inches, in same kind of ground, assay 1 dwt. 12 grains gold, 19 dwts. 12 grains silver. Providencia No. 2 hill drift driven 17 feet, total 91 feet. No change expected until we get through the present formation.—Copper Creek. The lately-commenced crosscut we have named "Aciga" drift, driven 22 feet, total 40 feet, assays 5 dwts. gold, 12 ounces 7 dwts silver, and 5·03 per cent. copper on a general sample taken throughout; 6 dwts. gold, 20 ounces 12 grains silver, and 6·72 per cent. copper on a sample taken on the sides only, showing we have not yet got the full width of lode. A dyke 2 feet wide has been encountered disturbing lode, but is again beginning to form on the opposite side. Old Providencia extracted 433 tons, assays 1 ounce 4 dwts. 12 grains gold, 11 ounces 19 dwts. 12 grains silver, 7·4 per cent. copper, and 1 ounce 1 dwt. gold, 9 ounces 18 dwts. silver, and 6·9 per cent. copper. Santa Fe stope extracted 318 tons, assays 14 dwts. gold, 6 ounces 13 dwts. silver, 3·22 per cent. copper and 18 dwts. gold, 7 ounces 3 dwts. silver and 3·64 per cent. copper. Taylor No. 3 extracted 154 tons. Assays 7 dwts. gold 6 ounces 13 dwts. silver and 3·71 per cent. copper. Providencia Aver sent 15 tons hand-picked ore to mill. Santa Fe Hill extracted 224 tons. Assays 1 ounce 19 dwts. gold, 11 ounces 3 dwts. silver, 5·61 per cent. copper, and 1 ounce 4 dwts. gold, 9 ounces 16 dwts. silver, 5 71 per cent. copper. Santa Fe Hill drift we have commenced to-day again. Assay showing 7 dwts. 4 grains gold, 2 ounces 1 dwt. silver, and 2·58 per cent. copper, and think it advisable to trace it further. In the pan gold does not show free, and copper as pure green carbonate. Taking the opportunity of Santa Fe winze being shut down, we are driving ahead Taylor main again, and which will eventually cut under Santa Fe Hill No. 2 drift. We have been greatly retarded in Santa Fe winze and Taylor No. 3 winze crosscuts. The weather having been very dry, we were obliged to shut down compressor for want of water, and with it, of course, the pumps. We have, however, taken the opportunity to repair compressor foundations, and with a fall of rain we are again ready to re-start.

COLON GOLD.—The mine superintendent writes under date September 17: I have now heard from Bogota that a Minister de Fomento has at last been appointed, my memorial presented, and I am hoping soon to get his resolution on Mr. Gledhill's last appeal. Since my last report I have received from Mr. Jenner, the English resident Minister in Bogota, his general report to the Earl of Kimberley upon mining in this country, and I am very glad to see that he lays great stress upon the damage being caused to mining enterprise by the obstacles placed in the way of the alluvial mines. The English Minister having studied this subject from quite a disinterested point of view, I am in hopes that this report will be of great assistance in convincing the Government that under the present situation some protection must be given to the mining industry. I feel sanguine that something will be done to improve matters during the present congress, and as soon as we get through with the first arbitration case with Mr. Gledhill, I hope it will be a much easier matter to deal with the remaining estate owners.

ELKHORN.—Copy of Mr. C. A. Molson's monthly report for September: Mine. Ore breaking department. 550 feet level south. The vein is 3 feet wide, and assays 42 ounces.—650 feet level south, No. 2 stope. The vein is 3 feet 6 inches wide, and assays 46 ounces.—750 feet level north. Cross cut raise stope. The vein is 30 inches wide, and the value 35 ounces.—Inside stope. The vein is 2 feet wide, and the value 40 ounces. The ends of the ground are being stoped away preparatory to stopping work here.—850 feet level north. The stope is 6 feet wide, and the value 42 ounces. At the north end the ore is mostly of the porphyry class, and includes the usual bunches of lead ore.—950 feet level north, back stope. The vein is 8 feet wide, and the value 45 ounces, exclusive of the rich lead ore which occurs as in the stope above.—North end. The vein is 2 feet wide, and the value 40 ounces.—1050 feet level south. The end of the stope is being worked out, and the ore is irregular in size and manner of occurrence; its value is 30 ounces. North of the shaft the vein is 30 inches wide, and the value 33 ounces.—1150 feet level south. No work has been done here during the month.—1250 feet level north, raise stope. The vein is broken up at the foot of the stope, and does not reach to the level. Work has been stopped here temporarily.—1350 feet level south, south end stope. The vein is 16 feet wide, and assays 28 ounces. Centre stope. The vein is 20 feet wide, and has fallen in value on the footwall side so as to make it unprofitable to work at present. The hanging portion, which is 6 feet wide, assays 30 ounces.—1450 feet level south, back stope. The vein is 6 feet wide, and the value 70 ounces, and 8 per cent. lead. The ore occurs in the usual bands of the smelting and milling class. Centre stope, foot of main raise. The vein is 20 inches wide, and the value is 100 ounces, and 12 per cent. lead. At the south end the ore is changing to dry silicious ore, averaging 48 ounces. North of the shaft the vein is 2 feet wide, and the value 30 ounces.—1550 feet level south, back stope. The vein is 30 inches wide, and assays 35 ounces. At the south end of the stope a small vein of high grade shipping ore is being prospected.—1650 feet level south, footwall cross cut stope. The vein is 4 feet wide and assays 38 ounces. The ore is very irregular in size.—Inside raise stope. The vain is 2 feet wide, and the value 56 ounces. The raise is up 72 feet above the level. All the ore is carried with the raise.—Prospecting Department. 750 feet level south. A cross cut is being put in to tap the ore under the No. 2 stope on the 650 feet level. It was advanced 14 feet during the month.—Shaft. Previously reported 59 feet; advanced in September, 77·5 feet; total depth below 1650 = 136·5 feet. The ground is somewhat harder, but the contact keeps of the same character.—Amount and source of ore broken. 550 level 9 cars, 750 level 248 cars, 850 level 178 cars, 950 level 228 cars, 1050 level 152 cars, 1150 level 40 cars, 1250 level 119 cars, 1350 level 376 cars, 1450 level 383 cars, 1550 level 19 cars, 1650 level 142 cars, total cars hoisted 1894, number of tons 1171.—Milling department. The mill was closed for one day during the month, owing to the fly wheel on the engine getting loose. The pans made their usual steady run.—Table of work performed in September. Ore on hand September 1st 50 tons, raised from the mine 1171 tons, less smelting ore 150 tons, waste sorted out 106 tons, 256 tons, 914 tons, add for salt 140 tons, dry ore panned 1058 tons, pulp in the mill 16 tons, rough ore in stock 31 tons—1105 tons.—Table of mill work. Dry tons panned 1058 tons, average assay value 37 ounces, average percentage salt used 14 per cent., average value of tailings 3 ounces, average percentage saved 92 per cent., No. of Doré bars produced 36 bars, No. of ounces fine silver 33,852 ounces, No. of ounces pure gold 26 ounces, batteries in service 27 days 2 hours, pans in service 28 days 12 hours, estimated value of bullion shipped $20,955, actual returns from 150 tons ore shipped 12,446—$33,401: current expenses, including salaries, labour and supplies, &c., $21,685; balance, being profit for September (or at $4.85 to £ sterling, £2415), $11,715.—Surface Department, Fuel. The supply has been delivered regularly during the month.—Repairs. The mill roof has been reshingled and the usual closing in attended to for the winter. The weather has been cold and stormy.

GREAT SOUTHERN TIN AND GOLD FIELDS.—The mining manager reports: Toora, Victoria, September 15.—The open cutting at western end of tunnel was finished on Tuesday, the 4th inst., and the same day the tunnel proper at same end was commenced. Work has continued, and to this date a little over 20 feet full size driven. Finished work in open cutting 42 feet, tunnel 20 feet total 62 feet from line of race proper. The rock in tunnel is not of that class that can be denominated hard, but yet too hard to work without explosions, the worse feature of its formation being the number of heads which in a certain measure "keys" the rock together, necessitating longer charges of explosives than is generally the case. The rock in tunnel is at an angle of about 40 degrees dipping south, making that side come away in too easy a manner for shaping. As far as I can at present discern very little timber except at the entrances will be required. I also see no cause up to the present to think that very hard rock will be met with in any quantity; the whole formation of the range and the rock in it, where showing, leads me to believe that the main of the tunnel will consist of sandstone; formation somewhat hard occasionally.

LOMA GOLD.—The mine superintendent reports under date September 12: Mine. Since last writing the water has been falling, so that we cannot run a 2½ nozzle, but are making use of what we have to open new ground cuts, excavate for sluice, and bring in grade to both Sotos Mine and old face. Also we have laid pipe in a ravine where we dump water into, and take it out lower down. This pipe we laid down to avoid trouble caused by water cutting bottom of ravine, where I regret to say we now find gravel very shallow, and may look for a rise of bed rock in this direction. We have been prospecting, and all leads to show the deepest deposit is at the Soto Mine. We have now had over six weeks without any rain to mention, and all streams at this elevation are almost dry. Even the lower mines are now getting short of water, San Miguel and Barrets below us are also unable to run a 3 inch nozzle; in fact, shut down for want of water.—Reservoirs. We are doing all possible to push this on, and make a good strong job of same. We have had a great amount of rock to blast out that the framework of dam may have secure trusses. All lumber is of the very best quality to be had on your or adjoining properties.—Prospecting. I do not be led by the prospects of one or two pans of gravel, but may state as far as it goes, we can, at Sotos mine, get a good colour (6 to 14) in almost every pan. I quite realise our present position, and how much cause each have to feel disappointed up to the present, but feel certain we will yet pull to the front. We are doing all to secure the ditch, and trust the first rains will not cause us great damage. At the same time, you can well understand how all ground is now open and cracked owing to so long a spell of dry weather, and danger arises from this."

PESTARENA.—Ends. The 46 end east is carrying a little ore on the footwall, valued at 1 ton of 1 ounce per fathom. The 55 end east on No. 1 lode carries a mixed branch of quartz and schist thinly charged with pyrites, but produces no ore to value. The 70 end east has been temporarily suspended, and the men set to drive an end on a branch that has passed to the north. The A and B end east shows some improvement, and it is hoped that in a few days it will be producing a little ore. The improvement seems to be owing to the junction of a branch from the north side. The lode in the 90 west on No. 1 is 1·20 metres wide, carrying about 40 centimetres of almost solid pyrites. Its value is estimated at 5 tons of 2 ounces per fathom. The lode in the 90 east on branch of No. 1 is looking much more promising, and is now carrying quartz and a little pyrites for a width of 1 metre. In the 140 end west on No. 5 the lode has become split into several branches. The north side is now being cut into to ascertain which branch shows most promise for driving on.—Crosscuts. The 55 Acquevite crosscut south has passed through a small branch of quartz carrying pyrites, but is again in hard schist. In the crosscut north nothing of importance has yet been met with. The 90 Acquavite crosscut south, the 70 and 130 crosscuts north are all in hard schist.—Stopes. These continue to produce the quantity reported on the 3rd inst., but the quality of the ore seems somewhat improved.—Kint Concession In the Cuja adit the rock is still mixed with faces of pyrites, but no branch has yet been met with. Fair progress is being made in opening the winze under the Quarazza adit, but the bottom of the old workings has not yet been reached. The lode in the Lanti end west is 1·20 metre wide and mixed throughout with pyrites, and no longer concentrated in the quartz as when last reported. Although it is not at present producing any but low grade ore, its appearance is most encouraging.—Stabioli Mine. In the Anza level north the lode is 1·20 metres wide, of which 50 centimetres is graphite schist mixed with quartz and small veins of pyrites. The rock in the crosscut driving west from the Morghen adit is carrying much more quartz, and a small branch has been passed through.—Pozzone Mine. The Depauli's workings had been forked to a depth of 40 metres, but owing to the bursting of a power pipe the water rose a couple of metres while the repairs were being carried out. This has caused no delay in forking, as we have used all our tubes up for the lifts, but 20 metres of new ones have been ordered, which will be delivered in a few days, when the forking will be again proceeded with. When the lifts were in forking will be again proceeded with. When the lifts were in fork there were still 5 metres clear underneath them, which was ascertained by lowering a plumb line, but whether the plumb rested on the bottom or a stull remains to be known.—Machinery. All continues to work satisfactorily, and there is still an abundant supply of water.—(Signed) W. Henwood Trelease, T. Henry Messa.

RIPANJI QUICKSILVER.—The manager reports: For 52¼ hours ran to the 20th inst., the yield of finished ore was 14 tons 6 cwts. Working of machinery imoroving.

SUNBURST GOLD.—Under date Charters Towers, September 8, the manager writes that the tribute crushings for the fortnight have given a profit of £68 19s. 7d. One crushing of 19 tons went 3 ounces to the ton. The directors have ordered the accounts for the year to be made up to September 30. These should reach the London office in about one one month, and the annual general meeting will be held in December, at which the report of the directors on the present condition and prospects of the mine, together with the balance-sheet for the 12 months ended September 30, will be submitted to the shareholders.

VICTORIA AND QUEEN.—Copy of manager's report for fortnight ending September 5: During the past fortnight the crosscut at the bottom of the straight has been driven a further distance of 22 feet, making total from slide 58 feet. Stacey and party have sunk your underlie a further distance of 18 feet, making total from No 2 plat 85 feet which finishes their contract. The reef is about 10 inches thick of fair quality stone. Jevons and party have driven the No. 1 level west a further distance of 12 feet, making a total of 100 feet from slide. The reef in the stopes along the back of this drive average from 15 to 18 inches of heavy mineral stone. We started to crush yesterday, and have about 50 tons for the trial crushing. We have hauled about 45 tons during the fortnight, making a total of 100 tons. Machinery and everything connected with this mine in good working order.

WENTWORTH EXTENSION.—Report dated September 15: Main shaft, west crosscut from 150 feet level in 215 feet; progress 9 feet through diorite without change. Main north-west drive on alluvial extends 20 feet. Wash continues to prospect well.

CAPTAIN R. BARKLA, manager of the New Lux Gold Mine, which is situated five miles from Cutana railway siding and 14 miles from Olary, has been to Adelaide to consult the directors with regard to the erection of machinery. A 15-head battery has been purchased, and Captain Barkla expects to have it in full swing within three months. It is stated that if there were sufficient water a 50-head battery could be kept going continuously. Captain Barkla told a representative of the *Adelaide Observer* that the mine has been proved to a depth of 250 feet, carrying good payable stone. There are six payable reefs showing on the surface. The mine manager estimates that the average of the reef stone will show a net profit of £2 10s. per ton for all the stone treated. The manager proposes to work the first 40 feet with the open-cut system. The permanency of the mine is undoubted, according to the captain.

AFRICAN CONSOLIDATED LAND AND TRADING.—The manager reports:—Coal. Work has been satisfactorily carried on during the week, and another 5 yards driven towards No. 2 shaft. The coal is, if anything, better as the work proceeds.—Trees. The trees in the plantation have wintered exceedingly well, and now warmer weather has arrived they will be out of danger. I have made a tree nursery near the mine, and have already planted many varieties of tree seeds best adapted for the climate. One-year old trees I am offering at 1s. each, but I suggest planting seeds each year as the least expensive course. I cannot attach too much importance to tree cultivation. This part of the country is destined to become a very large coal mining centre, and as the demand for timber for collieries is always very great, and of a necessity, and as there are practically no trees at all on the high-veldt, I recommend that considerable attention be made each year, and eventually it will become the source of a large revenue. Trees grow remarkably well, and by five years are suitable for pit props. I am taking note of the various kinds of trees and their suitability for a variety of purposes likely to be most required. The seed is inexpensive, and the returns are likely to be large.—Farming. I will go into this question at a later period, although it does not seem possible to make a mistake in entering into any department. In conclusion, I may say that a number of gentlemen are looking about here after coal and other properties, and no doubt about November or December, when the railway is opened, there will be many more. This week has astonished me, and seems to show the importance attached to this class of undertaking. In their circular to the shareholders the directors remark: "Instructions were dispatched some time ago to the manager that, while attention should be concentrated upon the coal works and the maintenance in this connection of the 'premier position,' the second object of the company's operations should be the tree planting, which, in the manager's view, is likely to become the source of a large revenue. The board learns by a cablegram, dated October 19, that 'the railway was linked-in yesterday morning.' The official opening of the line is, therefore, alone necessary to place the company's property in communication by rail with all the principal towns of the Transvaal and South Africa. The board is now advising with the manager and the best colliery and African authorities as to the best machinery to send to the property, it having been determined to equip the colliery in such a manner as to meet all the demands which may be made upon its resources."

ALMADA AND TIRITO.—Report for month ending September 29: Dios Padre. The 250 feet level driving north has been extended 22 feet 9 inches by four men during the month. The lode carries a good wall and is slightly mineralised. In the 250 feet level driving south we cut into old workings, and are endeavouring to push through them in order to resume driving.—Stopes. Our stopes have improved slightly, and are yielding good grade ore in paying quantities.

AUSTRALIAN BROKEN HILL CONSOLS.—The mining manager reports by mail for the fortnight ended September 13: Block 96, 280 level east prospecting drive, No. 4 rise stopes driven 37 feet. Stoping on rich vein continued. A decided improvement has taken place in the north eastern stopes. The lode here is widening and getting stronger, consisting of iron and carbonate of iron, yielding native and horn silver, chloride and iodide of silver. The northern face is also showing more encouraging indications, but the western stopes are not looking so well, although the mundic vein is very strong. Incline sunk 3 feet, total 578 feet. The lode here seems to be getting flatter and is well defined. Through a breakage of the pump operations here have been retarded.—No. 4 east off incline. Stopes driven 8 feet; no change. No. 1 rise off No. 4 level east off incline driven 10 feet 6 inches; no change. Have broken through with the underhand stopes off No. 3 level east.—Note. The quantity of rock mined during the fortnight was 2333 cubic feet.

BRITISH BROKEN HILL PROPRIETARY.—Mining manager's report for the week ending September 12: Blackwood (No. 1) shaft, 400 feet level. No work has been done in the north drive since last report. The south drive has been driven 7 feet, total length 100 feet; face now showing more mullock than heretofore. Work will be suspended on this level for a few days until the plat is completed. Are cutting out a plat on the eastern side of above shaft at a depth of 150 feet, at which point an easterly crosscut will be put in to intersect the eastern vein.—Howell (No. 2) shaft, 300 feet level. North-east drive is driven 4 feet, total length 22 feet; face in very hard low grade sulphide ore.—200 feet level. South drive off east crosscut is lengthened 8 feet, making its total length 69 feet, at which point it is stopped. Have come back about 8 or 10 feet from face of above (south) drive on a patch of ore, and have driven on same 8 feet, but have stopped this also.—Marsh (No. 6) shaft, second level. Have just started stoping southwards off winze in north drive, at a point 35 feet down the winze; stope showing fair grade carbonate ore. Have broken 4 tons, assaying 21 per cent. lead, and 40 ounces silver per ton; 2 tons seconds 22 per cent., and 31 ounces, and 2 tons thirds 20 per cent. lead and 18 ounces silver per ton. Uprise over north drive is risen 3 feet, total height 20 feet, roof showing carbonate ore. Have hoisted 8 tons seconds, assaying 15 per cent. lead and 41 ounces silver per ton. South drive off No. 3 east cross cut is lengthened 12 feet, total length 31 feet along footwall of lode.—No. 4 east cross cut. No. 2 uprise is risen 4 feet, total height 8 feet, showing carbonate ore. Have broken 6 tons seconds, averaging 22 per cent. lead and 47 ounces silver per ton.—Stopes. North stope over main south drive. Have broken and sent to surface 6 tons first, averaging 35 per cent. lead and 47 ounces silver per ton, 1 ton seconds, assaying 22 per cent. and 31 ounces, and 3 tons thirds averaging 20 per cent. lead and 18 ounces silver per ton.—South stope off No. 2 west cross cut. Have broken and hoisted 13 tons first ore, averaging 35 per cent. lead and 81 ounces silver per ton, and 5 tons seconds, assaying 22 per cent. lead and 31 ounces silver per ton.—Retallick's winze. North drive off winze at point 20 feet down has been driven 10 feet through carbonate ore. Have broken 19 tons seconds, averaging 34 per cent. lead and 35 ounces silver per ton. Have started a south drive on the lode from same point and seam of carbonate ore from which we won during the week 8 tons of seconds, averaging 19 per cent. lead 39 ounces silver per ton. The week's assays vary from 5 to 47 per cent. lead, and 4 to 198½ ounces silver per ton.

BAYLEY'S REWARD CLAIM.—Mining report dated Coolgardie, W.A., September 1. Sylvester's shaft sunk 4 feet, total 55 feet from chamber and 275 feet from surface. No particular change in the lode, which still continues in the shaft. It is intended after sinking another 5 feet to open out chambers both sides of the shaft, after which drives on the lode be driven each way, and sinking for the next lift resumed.—West crosscut (Gorrie's). No change to report, still in the same hard quartzite formation, total distance now being 173 feet, being 5 feet driven for week. No. 2 intermediate driven 6 feet, total 31 feet. Lode full size of drive, and in places carring brown iron streaks giving signs of improvement.—No. 1 intermediate. Have been chiefly timbering and now resumed rising, the lode being from 8 to 10 feet wide and in places showing very nice gold. 100 feet stopes still continue to yield stone of very fair quality.—50 feet drive north (Gordon shaft). Lode is large, from 6 to 7 feet, and should judge it to be fair battery stone. Trenching. Trench on the line of lode north of Gordon shaft has been completed, and started a shaft, which has been sunk 6 feet. This in future will be called air shaft, and reported as such.—Everard Shaft. North drive extended 15 feet, total 85 feet. No change. South drive driven 7 feet, total 130 feet from Everard shaft. Stopes yielding stone of very fair quality, lode being from 2 to 4 feet thick.—Cockshott Shaft. Main drive north at 60 feet level since resumed has been driven 12 feet, full length 42 feet from shaft. Lode 7 feet wide. Nice looking stone, but not much gold seen at present. Hope it will improve as we get underneath the drive from Everard shaft.—Machinery. The erection of the second 10 heads will shortly be completed. All the heavy work now being completed.—Camels. Eight of the camels are in very good condition just at present, and to keep them employed shall send them to the Cross for stores which are arriving.—Stone crushed. During the week under present water difficulties we have had a very good run, having crushed 84 tons 10 cwts., being from the strong room.—Yield. Yield has resulted in a return of 700 ounces of gold.—W. H. Matthews.

BALAGHAT-MYSORE.—Captain Jos. Pryor, October 3: Ogle's shaft. In consequence of an accident to the pumping engine we have not been enabled to make the anticipated progress in deepening this shaft. It, however, affords me pleasure to say the water is not only in fork, but the men are once more working at the bottom of the shaft, the depth of which is now about 51 feet below the 800 feet level. The quartz is over 1 foot wide, and assays 1 ounce 10 dwts. 2 grains of gold per ton. The 800 feet level south has been driven 17 feet 9 inches, or 54 feet 3 inches from the shaft. The lode continues to present a very promising appearance, and now produces quartz of from 3 to 6 inches wide and assays 9 dwts. 2 grains per ton. The 800 feet level north has been extended 6 feet 6 inches, or 225 feet from the shaft. The quartz varies from 1 foot to 6 inches wide, and assays 1 ounce 3 dwts. 4 grains of gold per ton. The influx of water referred to in my last report at the No. 1 winze at the 800 feet level north has caused the ground in and near the winze to be so very treacherous to work under that we have been obliged to postpone the driving of the 870 feet level south (from the bottom of this winze) for the present. The quartz at this place is about 1 foot wide, and assays 3 ounces 5 dwts. 5 grains per ton. The No. 2 winze in the bottom of this level has been sunk 3 feet, or 27 feet below the level. The quartz varies from 1 foot to 4 inches wide, and assays 1 ounce 2 dwts. 2 grains of gold per ton. The stopes in the bottom and back of this level yield quartz of from 6 inches to 1 foot wide, and assay on an average 1 ounce 10 dwts. 15 grains of gold per ton. The stopes in the bottom of the 730 feet level north yield quartz of from 9 inches to 1 foot wide, and assay on an average 9 dwts. 8 grains of gold per ton.—Haine's shaft. I am glad to say a decidedly more satisfactory rate of progress is now being made in the sinking of this shaft, 8 feet having been sunk during the last fortnight, making its present depth 17 feet below the 870 feet level. The quartz varies from 9 inches to 1 foot 6 inches wide, and assays 6 dwts. 7 grains of gold per ton. The 870 feet level north has been driven 7 feet 6 inches, or 89 feet 6 inches from the shaft. The ground continues disordered; it, however, still yields a little quartz, which assays 2 dwts. 17 grains of gold per ton. We have suspended the driving of this level for a time, but hope to resume it again in the course of another month or so. A stope in the back of this level produces quartz of from 2 to 4 feet wide; its assay value is, however, at present very low, being worth only 2 dwts. 17 grains of gold per ton, but I am hoping it will ere long considerably improve. The 870 feet level south has been extended 23 feet, or 120 feet 9 inches from the shaft. The quartz varies from 9 inches to 2 feet wide, and assays 1 ounce 10 grains of gold per ton. The communication of this level with the winze referred to in my last has been duly effected; this has greatly improved the ventilation, and also conveniently laid open another section of stoping ground. At about 40 feet from the shaft the sinking of a new or No. 1 winze has been commenced; it is now down 7 feet below the level. The quartz is about 1 foot wide, and assays 5 dwts. of gold per ton. The stopes in the back of this level produce quartz of from 1 foot to 2 feet wide, but the assay value is just now very low, viz., 3 dwts. per ton, but this will, I think, very soon improve. The No. 1 winze in the bottom of the 800 feet level south has, as previously intimated, been communicated with the level below. The No. 2 winze in the bottom of this level has been sunk 5 feet, or 38 feet below the level. The quartz varies from 6 inches to 1 foot wide, and assays 5 dwts. 2 grains per ton. Up to this depth this winze has been sunk on the eastern part of the lode, the other part being still standing intact to the west of us; believing the latter will eventually prove the most productive, we have recently put the men to incline the winze in this direction, and hope shortly to meet with the western lode. The stopes in the bottom and back of the 800 feet level south yield quartz of from 9 to 15 inches wide, and assay on an average 6 dwts. 19 grains per ton. A stope in the back of the 800 feet level north yields quartz of from 15 inches to 18 inches wide, but assays only 2 dwts. 17 grains per ton. The stopes in the bottom and back of the 730 feet level south produce quartz of from 6 inches to 1 foot wide, and assay on an average 9 dwts. 8 grains per ton.—Tennant's Shaft. The timbermen are making fairly satisfactory progress with the fixing of the timber, &c., for the tip-plat at the 420 feet level, and we hope to get the plat completed in the course of another few days. The 420 feet level north has been driven 22 feet 9 inches, or 60 feet 6 inches from the shaft. The lode has, as anticipated, recently very much improved, and now yields quartz of 1 foot 9 inches wide, and of an assay value of 6 dwts. 7 grains per ton. Judging from the present appearance of this end I still look forward to a further improvement as we extend northward in the lode both in its size and in the value of the quartz. The cross cut east at the 420 feet level south has been advanced 7 feet, or 19 feet 3 inches from the level. Not having met with anything of importance we have discontinued the cross cut and put the men to drive south on the branch previously intersected, on which we have driven 6 feet 6 inches, this lode although presenting a kindly appearance does not yet produce any quartz to value. It will possibly be remembered that in the sinking of the shaft between the 350 and 420 feet levels we passed through a lode yielding quartz of 3 to 5 feet wide, and that it soon after became much smaller. Being somewhat doubtful as to whether the lode has really folded or not at this place, we have stripped the quartz and ground from the hanging wall, and are now driving a mid level northward to satisfy ourselves on this point. This level is now 6 feet beyond the north end of the shaft. The lode yielded quartz of over 3 feet wide and of an assay value of 4 dwts. per ton. The 350 feet level north has been driven 11 feet 6 inches, or 188 feet 9 inches from the shaft. The lode is of a kindly appearance and produces quartz 9 inches wide which assays 5 dwts. 2 grains per ton. The No. 1 winze in the bottom of this level has been sunk 11 feet 3 inches, or 52 feet 6 inches below the level. The quartz varies in width from 1 foot downwards. At the present time the lode is somewhat disordered, but it will, I think, again soon improve. The rise in the back of this level has been advanced 7 feet, or 73 feet 6 inches above the level. The quartz is 1 foot wide and assays 6 dwts. 7 grains per ton. A stope in the back of this level yields quartz of from 2 to 3 feet wide and assays 9 dwts. 2 grains per ton. The No. 1 winze in the bottom of this, the 350 feet level south, has been sunk 4 feet 3 inches, or 38 feet below the level. The quartz is at present small intermixed with the country rock, and only assays 2 dwts. 7 grains per ton. The 285 feet level north has been driven 7 feet 6 inches, or 49 feet from the shaft. The lode is of a promising appearance. We expect soon to communicate this level with the rise from the back of the 350 level, and shall thereby very considerably improve our ventilation.—Surface. Instead of attaching a run of flat rods from Ogle's to Haines' shafts as intimated a little time ago, we have decided to utilise the little engine from the south shaft, and fix it at Haines', and thus have an independent run of rods; the water will, however, continue to be conveyed through the 500 feet level south back to the pitwork at Ogle's shaft as hitherto. The excavations for the necessary foundation of this engine have been made, and on completion of the small masonry loadings the work of erecting the engine will be proceeded with as quickly as possible. All other surface work is progressing satisfactorily.

CONSOLIDATED GOLD MINES OF WESTERN AUSTRALIA.—Recent advices to hand from Western Australia state that the Coongan Mine is looking very well. The underlie shaft is now down 150 feet, with a 60 feet face, and the stone is improving daily in character. A new main shaft is down 40 feet. The present manager proposes sinking this shaft to the water level, not only to improve the water supply for the new machinery, which will be shortly erected on the claim, but also to test the reefs which are known to run underneath those now being worked. The ore in the underlie shaft and stopes remain unchanged in size, but has improved in character, the gold becoming of a heavier nature. There are already 250 tons at grass awaiting treatment, and by the time this is crushed there should be at least another 100 tons or 150 tons ready; in fact, there is more than enough stone to keep the mills fully employed. The mills are now in complete working order; the new pump (a Knowles patent) has been erected, and is working very smoothly. Water can be obtained by sinking anywhere about the property, at depths ranging from 40 to 80 feet, more usually at about 60 feet. A 5-acre area has been taken up adjoining this lease to the north and west, embracing the old Golden Hope ground, where a good deal of gold was obtained. Tenders for the new Government buildings to be erected here close next month. The new post and telegraph master arrived by the mail, and telegrams can now be sent at normal rates. The material for the post and telegraph office has arrived, and the building is proceeding as fast as could be expected, considering that skilled labour is not just now available.

COLOMBIAN HYDRAULIC.—T. P. Sharman, September 20: Run No. 196. After a run of 43 days, during which time we have been washing 948 hours with our full water supply, we have cleaned up a total of $12,412 64 at a cost of about $4558.40 (gold). I am glad to say that the improvement in the gravel at Clarke's Banks, which is so marked, seems to begin at the point where the bedrock dips away from towards Aguas Claras, giving rise for hopes that when we open on the Aguas Claras side we shall not be disappointed with the returns. The cost of drifting is greater, which arises from the fact of the rich gravel in the deep cut not giving such large returns, therefore more work has to be done to obtain the same quantity of gold; also a good deal of money is being spent on the adit, which sooner or later will bottom the centre of the channel; and from which we shall be able to extract gravel in larger quantities than ever before, as all the gravel taken from the channel in the old days was below the water level, and pumping will, of course, be entirely dispensed with for all the gravel lying above the adit level. This run (No. 197) will, I believe, be our last one on Clarke's Banks from the present opening; we shall then begin lower down with an entirely new sluice. We may have some delay from the end of the present run before we can recommence washing, as nearly ½ a mile of pipe has to be laid and a new sluice put in. This work could be done now if we had enough men, but up to now men have been most difficult to obtain.

GOLDEN GATE.—The diamond drill has now reached a depth of 1500 feet from surface. The manager, in his mail advices to hand, says:—There seems an excellent prospect of cutting reefs in the deep ground, and he thinks the profits from the tributes in the old ground will pay our way in putting down the bore. During the fortnight we have had two fair tribute crushings, one yielding 50 ounces 13 dwts. from 26 tons, the other 37 ounces 12 dwts. from 35 tons 5 cwts.

FRONTINO AND BOLIVIA.—La Salada, September 10: I am sorry to inform you that I have nothing encouraging to write you this mail, principally through the many breakdowns on the water-course. On the night of the 1st inst. there happened one of the heaviest rainstorms which has been seen in this district for many years, and every water-course on the company's property was damaged more or less. Although the landslips were none of them exceedingly large (except one on the Pocuné Ditch) they were so many that it required many hands and much time was spent before the machinery was running again. The pumps in the mines were all idle, as also the mills; the consequence of this is that all the lower workings were under water in a very short time, and some of them still are. I have, therefore, been unable to see any of these workings to report on their condition, and there has been no choice but to mill such mineral as could be obtained at shallow depth, the richest mineral being in the bottom workings. This has naturally caused a decline in the mill returns, and the month's remittance will be a small one, at least the present prospects indicate such. When the mines are dry, I shall commence to mine on the richer mineral, but so little of the "mill month" remains, that it will be impossible to recover what has been lost by the accidents mentioned. I shall have no sinking to report by the next mail, and only very little driving in the lower levels, the principal work being done is stoping, scattered throughout, wherever practicable, the hoisting apparatus helping as much as possible the pumps, to dry the mines quickly. You will, of course, gather that the damages have most affected El Silencio and La Salada, the other mines, Cordoba, Tigrito, Marmajito, and Marmajon were in their usual state of procedure in a day or so after the storm had ceased.—August Returns. I regret that I am unable to send you by this mail the result of the month's work. I have, therefore, decided to dispatch this post, and to cable you immediately after I have received the necessary information.—Tias Water-Course. The work of the opening of this water course has been commenced, but it is now intended to spread it over the period occupied in erecting of the Salada new mill. Costs. The working cost of the mines for the past month are somewhat less than the previous month, but in the aggregate they exceed them, the principal extras being more gold bought from the tributers, the freight on pyrites to Barranquilla and thence to England, and freights on machinery and stores from Barranquilla to Zaragoza and the mines. The expenses henceforth, for several months to come, will be exceptionally heavy, as the erection of the new machinery has arrived to such a stage that it would be very unwise I consider not to push it forward, having also regard to the favourable advantage of a high exchange. Amongst the items are the purchases of a large number of animals, which I found could not be done any longer without.—General. You will observe that not being able to report on the Silencio and Salada Mines in the usual way, I have omitted to make any mention of Tigrito, Cordoba, Marmajon and Marmajito. My explanation for this is that little or no change has occurred in either of these mines since my last, and there is, therefore, practically nothing new to report.—Geo. W. Eustice.

GRAVEL GOLD.—L. Scrutton, September 20: Operations, run No. IX. We commenced washing on September 11 on the eastern side of the Rica deposit, where the bank is somewhat low but rises as we work it back. On account of the long drought the water supply has diminished, and up to the present I have only had water enough for one monitor with a 5 inch nozzle. It is almost certain that the dry season will break in the course of a few days, and the streams will then rapidly regain their normal level.

HARRIETVILLE.—Fortnightly report of Mr. T. G. Davey, superintendent, dated September 14: Mons Meg Mine. North rise at back of 100 feet level below tunnel D advanced 8 feet, total 85 feet. This rise is now only 5 feet from bottom of underhand stope on main shoot below D, and a drillhole has been bored through to it on the hanging wall. No payable stone has been met with, so that a crosscut is being extended in a westerly direction towards footwall, and auriferous stone should soon be developed. From the back of the south rise at same level a crosscut has been driven west 13 feet, but without intersecting any payable stone. We are now stoping on a vein of quartz 3 feet wide south of rise in which gold is occasionally visible. We are about to extend the 100 feet level in a southerly direction.—Stopes: Lode in stopes at back of drive south of tunnel D 15 feet wide, and assaying 5 dwts. per ton. Stopes at back of 240 feet below J, lode 2 feet wide, and assaying 6 dwts. per ton. Lode in stope at back of 100 feet level below J 2 feet wide, assaying 8 dwts. per ton. This shoot is only 25 feet in length.—St. Bernard Mine. Drive north of bottom tunnel on Walden's lode advanced 11 feet, total 39 feet. Drive south at same level extended 18 feet, total 49 feet. Lode continues somewhat auriferous, but not payable. A drive has been extended south from Grimsley's tunnel and a solid lode has been reached, which has a promising appearance and is somewhat auriferous, but not payable. The influx of surface water is still too heavy to admit of our working on the rich vein at the upper tunnel.

MOUNT ZEEHAN (Tas.).—Manager writes for week ended September 11: Argent section main engine shaft, No. 4 lode, No. 72 feet level south of crosscut from No. 6 lode has been extended 18 feet 6 inches, total from main crosscut 267 feet 6 inches; there is no defined lode, but in footwall of drive are strings of carbonate of iron.—No. 6 lode, 132 feet level north. Have started to sink a winze on the hanging wall side and sunk 3 feet, present appearances indicate the probability of lode splitting up.—No. 7 lode. Winze sunk 10 feet, total from surface 36 feet. Lode north end 2 feet wide, south end 2 inches, composed of carbonate of iron, with traces of galena. Concentrator has been run 30 hours on Zeehan-Montana Company's ore and milled 97 tons seconds for 12 tons 14 cwts. concentrates, containing about 9 tons 11 cwts. lead and 1172 ounces of silver.

MYSORE REEFS.—Fortnightly report of Captain M. Scantlebury, mine agent, dated October 3: Underlie Shaft. This shaft has

been sunk 2 feet 6 inches, now 61 feet below the 250 feet level. The lode is so much disordered that I have suspended the sinking for the time, and put the men to cut out the lode in the ends of the shaft where the quartz appeared to have died out, in order to ascertain whether it is heaved to the west. The 250 feet level south has been advanced 15 feet, now 90 feet from shaft. The quartz is 3 inches wide, assaying 2 ounces 7 dwts. of gold to the ton.—Stope in back of 250 feet level north. The quartz is about 6 inches wide, and the average of several samples is 15 dwts. of gold to the ton.—Stope in the bottom of this level. The quartz is 1 foot wide, and the average of several samples is 13 dwts. of gold to the ton.—Vertical Shaft. This shaft has been sunk 7 feet 6 inches, now 31 feet 6 inches below the 200 feet level. The rock here is fearfully hard and spare for sinking.—200 feet level south. The winze below this level has been sunk 2 feet, now 27 feet below the level. The quartz is 15 inches wide, and worth from 1 to 4 dwts. of gold to the ton. I am stoping the sides of this winze.—Stope in back of this level. The quartz is 8 inches wide, and worth 18 dwts. of gold to the ton.—200 feet level north stope in back. The quartz is 6 inches wide, and worth 6 dwts. of gold to the ton.—Stope in bottom of this level. The quartz is 15 inches wide; the samples vary a great deal; the average is 1 ounce 2 dwts. of gold to the ton. New north shaft has been sunk 13 feet, now 58 feet from surface. The rock here is very hard for so shallow a depth.

MYSORE.—From Mr. Richard Hancock, October 3: Mining operations for the fortnight ending October 1: Rowse's shaft, 1460 crosscut west. This end has been driven 22 feet, making a total distance driven of 191 feet.—1460 feet level south of winze. This end has been driven 25 feet, making a total distance driven of 46 feet. The lode is 1 foot wide, assaying 1 ounce 0 dwt. 21 grains.—1360 feet level south of crosscut. This end has been driven 4 feet, making a total distance driven of 138 feet 4 inches. The lode is 1 foot 6 inches wide, assaying 2 ounces 3 dwts. 6 grains. The lode in the stope in the back of this level is 1 foot 6 inches wide, assaying 3 dwts. 22 grains.—1360 feet level north of winze. There are two stopes in the back of this level, the average width of the lode being 6 feet 6 inches, giving an average assay of 3 dwts. 6 grains.—1260 feet level north. There are four stopes in the back of this level, the average width of the lode being 5 feet 1 inch, giving an average assay of 1 ounce 7 dwts. 21 grains.—1260 feet level south. Driving south on the fold has been driven 29 feet, making a total distance driven of 193 feet 6 inches. The lode is 4 feet wide, assaying 1 ounce 2 dwts. 4 grains. The drive north from the fold to the shaft plat has been driven 15 feet 6 inches, making a total distance driven of 34 feet 6 inches and communicated. There are three stopes in the back of this level, the average width of the lode being 2 feet 4 inches, giving an average assay of 1 ounce 6 dwts. 6 grains.—1160 feet level north. There are five stopes in the back of this level, the average width of the lode being 2 feet, giving an average assay of 1 ounce 1 dwt. 20 grains.—1160 feet level south. The lode in the stope in the back of this level is 1 foot 6 inches wide, assaying 2 ounces 12 dwts.—1060 feet level north. We have two pares of men stripping down side in the bottom of this level in which the lode averages 1 foot wide giving an average assay of 19 dwts. 14 grains.—990 feet level north. We have a pare of men stripping down side in the back of this level in which the lode is 1 foot wide, assaying 7 dwts. 19 grains.—890 feet level north. The lode in the stope in the back of this level is 1 foot 6 inches wide, assaying 10 dwts. 10 grains.—890 feet level north east. This end has been driven 2 feet making a total distance driven of 623 feet 7 inches. At this point we intersected a body of quartz and have driven north on it 7 feet, but the lode having become disordered we suspended this and put the machine to drive south on it. Distance driven 13 feet. The lode is 4 feet wide, assaying 2 ounces 1 dwt.—780 feet level north. The lode in the stope in the back of this level is 3 feet wide, assaying 7 dwts. 3 grains.—780 feet level north on new chute. This end has been driven 16 feet, making a total distance driven of 103 feet. The lode is 1 foot wide, assaying 7 dwts. 19 grains. We have commenced a rise in the back of this level, 30 feet north of the crosscut, which has been put up 7 feet. The lode is 2 feet 6 inches wide, assaying 3 ounces 6 dwts.—780 feet level south on new chute. This end has been driven 3 feet, making a total distance driven of 13 feet 6 inches. The lode is 1 foot 6 inches wide, assaying 19 dwts. 14 grains.—620 feet level north of cross cut. This end has been driven 4 feet 3 inches making a total distance driven of 269 feet 9 inches. There is about 6 inches of quartz in the end; no assay made. There are three stopes in the back of this level, the average width of the lode being 4 feet 4 inches, giving an average assay of 6 dwts. 21 grains.—Crocker's shaft. This shaft has been sunk 28 feet, making a total depth of 40 feet below the 466 feet level. There is a little quartz, assaying 10 dwts.—400 feet level north. There are four stopes in the back of this level, the average width of the lode being 3 feet 9 inches, giving an average assay of 9 dwts. 22 grains.—400 feet level south. The lode in the stope in the back of this level is 4 feet wide, assaying 1 dwt. 7 grains.—296 feet level north. There are four stopes in the back of this level, the average width of the lode being 1 foot 9 inches, giving an average assay of 15 dwts. 8 grains.—236 feet level north. There are five stopes in the back of this level, the average width of the lode being 1 foot 5 inches, giving an average assay of 1 ounce 8 dwts. 4 grains.—Taylor's shaft 466 feet level north. The lode in the stope in the back of this level is 2 feet wide, assaying 11 dwts. 17 grains.—Gilbert's shaft, 520 feet level north. The winze in the bottom of this level has been sunk 5 feet 6 inches, making a total depth of 55 feet 6 inches. The lode is 2 feet wide, assaying 2 dwts. The lode in the stope in the back of this level is 2 feet 2 inches wide, assaying 13 dwts, 1 grain.—520 feet level south. The lode in the stope in the back of this level is 2 feet wide, assaying 15 dwts. 15 grains.—360 feet level north. There are two stopes in the back of this level, the average width of the lode being 2 feet 3 inches, giving an average assay of 1 ounce 2 dwts. 20 grains.—290 feet level north. There are three stopes in the back of this level, the average width of the lode being 1 foot 10 inches, giving an average assay of 17 dwts. 14 grains.—180 feet level south. We have two pares of men engaged taking away arches of ground in the back and bottom of this level, in which the lode averages 4 feet 3 inches wide, giving an average assay of 1 ounce 3 dwts. 9 grains.—Tennant's Shaft. This shaft has been sunk 8 feet 3 inches, making a total depth of 36 feet 6 inches below the 600 feet level.—600 feet level north. This end has been driven 9 feet 6 inches, making a total distance driven of 124 feet 6 inches. We have temporarily suspended the driving of this end, and have put the machine to rise in the back of the level 116 feet 6 inches north of the shaft, with the object of effecting a communication with the winze sunk in the bottom of the 520 feet level north. Risen 5 feet 6 inches. There is nothing here to report.—520 feet level north. The winze in the bottom of this level has been sunk 7 feet, making a total depth of 78 feet 6 inches. We have suspended the sinking, and have put the machine to stope in the north end of the winze on a lode 5 feet 6 inches wide, assaying 19 dwts, 14 grains. There are two stopes in the back of this level, the average width of the lode being 2 feet 3 inches, giving an average assay of 7 dwts. 3 grains.—290 feet level south, north of cross cut. The lode in the stope in the bottom of this level is 1 foot 6 inches wide, assaying 1 ounce 19 dwts. 6 grains.—Schaw's Shaft. 450 feet level north cross cut east. This has been driven 2 feet 6 inches, making a total distance driven of 38 feet. The winze in the bottom of this level has been sunk 3 feet 9 inches, making a total depth of 108 feet. The lode is 1 foot wide assaying 1 ounce. There are 2 stopes in the back of this level, the average width of the lode being 1 foot 3 inches, giving an average assay of 1 ounce 1 dwt. 9 grains.—450 feet level north, south of crosscut. The winze in the bottom of this level has been sunk 8 feet, making a total depth of 69 feet 6 inches. The lode is 1 foot 6 inches wide, assaying 18 dwts. 6 grains. There are 3 stopes in the back of this level, the average width of the lode being 2 feet 4 inches, giving an average assay of 1 ounce 2 dwts. 6 grains.—320 feet level north, south of crosscut. The lode in the stope in the back of this level is 1 foot 6 inches wide, assaying 5 dwts. 5 grains.—McTaggart's shaft. This shaft has been sunk 13 feet 3 inches, making a total depth of 85 feet 3 inches below the 450 feet level. There is nothing here to report.—450 feet level south. The lode in the stope in the back of this level is 1 foot 6 inches wide, assaying 6 dwts. 12 grains.—Glen shaft, crosscut west. This has been driven 18 feet, making a total distance driven of 127 feet.—Crosscut east. This has been driven 3 feet, making a total distance driven of 270 feet 6 inches.—Ribblesdale shaft. This shaft has been sunk 15 feet, making a total depth of 417 feet.—1060 rise. This has been put 5 feet 6 inches, making a total height of 47 feet.—William's shaft, crosscut east from the 173. This has been driven 3 feet, making a total distance driven of 71 feet. Health good.

MOUNT LYELL.—The London committee have received the following report from the Melbourne board, viz., for the week ending September 6: Engine shaft 100 feet level No. 4 tunnel. The north drive has been advanced 8 feet, total 20 feet, country ironstone and conglomerate.—Engine shaft No. 4 tunnel, 75 feet level No. 2 crosscut. 4 men have been engaged in stripping and breaking ore; rich ore is showing all over the face which is looking splendid and continues to turn out rich ore. This week we have raised and sampled the following lots:—Course ore, 9 tons 6 cwts. containing 24,180 ounces silver, and 1 ton 2 cwts. 1 qr. 3 lbs. copper, average silver 2600 ounces per ton, copper 11 per cent. Gold trace, fines, 5 tons 1 cwt. 3 qrs. 14 lbs., containing 10,376 ounces silver, and 15 cwts. 2 qrs. 10 lbs. copper, average silver 2035 ounces, copper 15·3 per cent., gold 10 dwts. per ton. This with the lot of 8 tons 4 cwts. containing 21,566 ounces silver, and 15 cwts. 2 qrs. 9 lbs. copper, advised previously from this level makes the total output from here for the fortnight 56,122 ounces silver, and 2 tons 13 cwts. 1 qr. 22 lbs. copper. I have had a borehole put in ahead proving another 3 feet. —Stopes. The stopes above this level continue to furnish high grade ore.—Engine shaft 50 feet level No. 4 tunnel south drive. The south drive has been driven 5 feet, total 186 feet. Face is in schist rock.—Ditto, ditto north drive. The north drive has been advanced 14 feet, total 80 feet; country conglomerate requiring shooting.—No. 4 tunnel rise over old winze. The timbering of the rise has been completed and the rise has been put up 3 feet, total 25 feet. The two rich veins show no particular change.—No. 5 tunnel. The contractors have driven 18 feet, total 800 feet. There is no change to report. The country is very easy to work.—Surface. The erection of the new office is well in hand and will be completed next week.—Ore despatched. 778 bags weighing 37 tons 10 cwts. 12 lbs. containing 8 tons 13 cwts. 24 lbs. copper, and 23,180 ounces silver.

NAMAQUA.—Abstract of superintendent's report for August: Tweefontein Mine. 115 fathom level east. The lode in the present forebreast shows an increase of width, and has a very promising appearance. Worth 2 tons of ore per fathom.—115 fathom level east, No. 29 winze. The ground here is slightly mineralised, but yields nothing of value.—115 fathom level west. This driving has slightly improved, and now shows mineralised ground of a very promising nature for about 2 feet in width.—105 fathom level east. The lode is still large and mineralised throughout, but is of little or no commercial value.—105 fathom level west. The lode being composed chiefly of quartz and magnetic iron, spotted only with copper ore, yields nothing of value.—105 fathom level west, No. 27 winze. This winze is now to the depth of the 115 fathom level west. Worth 3 tons of ore per fathom.—95 fathom level west. There has been no change at this point. Worth 6 tons of ore per fathom.—95 fathom level west, No. 28 winze. The lode has fallen off both in width and quality, and is now worth 3 tons of ore per fathom.—85 fathom level west. The lode is massive and mineralised throughout, and is worth 3 tons of ore per fathom.—New shaft, 25 fathom level west. The lode appears to be much broken up, but it still yields a fairly good quantity of rich ore, and is worth 7 tons of ore per fathom.—25 fathom level east, No. 1 winze. This is still opening up a very valuable section of ground. The part of the lode carried is about 6 feet wide. Worth 9 tons of ore per fathom.—Stopes. 105 fathom level west (back of), and 95 fathom level west (bottom of). These stopes are still without change, and are worth respectively 10 tons and 8 tons of ore per fathom.—New shaft. 25 fathom level west (back and side of). These stopes are opening out to a great width, are yielding well, and are each worth 10 tons of ore per fathom.—Shipping. The *Wanlock* left Port Nolloth for Swansea on the 25th September, with about 1050 tons of ore. The *Glanrafon* arrived at Port Nolloth to load on the 12th October.—Output for September. 450 tons of ore of 28 per cent.

NINE REEFS.—Fortnightly report of Captain John Woolcock, mine agent, dated October 3: Vyvyan's shaft. There is no change to notice in the character of the lode in the stopes working in the back of the 220 feet level to the south of shaft. In the No. 2 stope to the north of winze the quartz portion of the lode, which is against the footwall, is from 8 to 10 inches wide and worth by assay 1 ounce 4 dwts. 2 grains of gold per ton; the ground is hard, and we are obliged to carry the stope from 2½ to 3 feet wide, and pick out as much as possible of the unproductive rock at surface. Ground stoped for the month 6 fathoms 5 feet 4 inches. The lode in the No. 3 stope to the north of winze is 3½ feet wide, carrying quartz 8 inches, and this by assay is worth 17 dwts. 20 grains of gold per ton. This stope at present is a little to the south of the shoot, but will improve in value as we gain north. Ground stoped for the month 5 fathoms 4 feet 3 inches.—Bennett's shaft. The crosscut west at the 145 feet level to the north of this shaft has been driven 9 feet 9 inches, and is now 321 feet 6 inches from the level. We have met with several small veins of carbonate of lime and a little soft decomposed quartz, but nothing of value. The end has passed through a porous strata of ground, which is running through one of our mill tanks, and since the late heavy rain we have had trouble with the water filtering through from surface, and for several days we were obliged to work the engine 13 strokes per minute. The tank is again dry, and the water has considerably fallen off.—South shaft. The 145 feet level south of shaft has been driven 21 feet 3 inches, total distance 49 feet. The lode at present is more than the width of the level, but of a disordered character and carrying very little quartz. A sample broken from the end yesterday gave by assay 3 dwts. 6 grains of gold per ton. I am hoping that the end is only in a disordered patch, and will soon improve again. The 145 north has been driven 24 feet 5 inches, total from shaft 50 feet. The lode is 4 feet wide, and carrying quartz against the hanging wall 18 inches wide. The remainder is composed of schist, and stringers of quartz, the whole of which is highly stained with oxide of iron. A sample broken yesterday gave by assay 4 dwts. 12 grains of gold per ton. The lode has very much improved in appearance in last few days, and I am hoping that the value of the ore will very soon be better. The crosscut east has been advanced 5 feet, total from shaft 114 feet. We have met with nothing here since the report of the 19th ult. The men have been engaged in the past week taking out ground for cistern in bottom of the 145 south level. The cistern is fixed and the timberman is now taking up the water from both levels and upper part of the shaft. I hope to get this finished and resume the sinking in a day or two.—Prospecting: McTaggart's lode, No. 1 shaft. The level driving north from the bottom of this shaft has been driven 6 feet 3 inches, total from shaft 14 feet. The lode is 18 inches wide, composed of a soft schist and veins and stringers of quartz, with two well-defined walls and highly stained with iron, and worth by assay 3 dwts. 2 grains of gold per ton. The level driving south from shaft has been advanced 8 feet 1 inch, total from shaft 16 feet 3 inches. The lode in this end is 20 inches wide, and of a similar character to that in the north end. A sample from this gave by assay 2 dwts. 16 grains of gold per ton. There has been very little done in the No. 4 since last report. Some ground in the upper part of the shaft was made rather unsafe by the late rain, and I thought it best to stop the sinking for a time as our timberman cannot attend to the work just now. The No. 5 shaft has been sunk 7 feet 6 inches, total from surface 76 feet 9 inches. The lode is from 20 inches to 2 feet wide of a soft schist and stringers of quartz, and contains a good deal of magnetic iron, and the assay value is 4 dwts. 12 grains of gold per ton.—Surface. Our surface work throughout the mine does not call for any comment. The machinery, pitwork, &c., are in good order and working satisfactorily.

NUNDYDROOG.—Mr. Thomas Richards, October 3: Report for the fortnight ending September 29. Taylor's shaft has been sunk 6 feet, total depth 1127 feet, or 47 feet below the 1080 level. In the central portion of the shaft the lode is disturbed by a dyke, but it is well defined in both ends of the shaft for 1 foot in width, and assays 10 dwts. 18 grains per ton. The 1080 south has been driven 13 feet, total distance 123 feet. Lode 6 inches wide, assaying a trace of gold. The 1080 north has been driven 12 feet 6 inches, total distance 137 feet 6 inches. Lode 1 foot wide, assaying 3 dwts. 6 grains. The winze below the 1000 south has been sunk during the month 6 feet 6 inches, total depth 26 feet. Lode 4 inches wide. Assay 6 dwts. 12 grains. The 1000 north has been driven 23 feet, total distance 671 feet. Lode 1 foot wide, assaying 3 ounces 10 dwts. The rise in the back of this level against the main shaft has been communicated with the part sunk below the 920 feet level. Lode 3 feet wide, assaying 1 ounce 2 dwts. 18 grains per ton. The 920 north has been driven 10 feet 6 inches, total distance 139 feet. Lode 2 inches wide, assaying 3 dwts. 6 grains. The 920 No. 2 north has been driven 19 feet 6 inches, total distance 306 feet 6 inches, or 58 feet 6 inches from the north end of main shaft. No value. The 840 north crosscut east has been driven 13 feet, total distance 82 feet. No change, ground very hard. There are three stopes being worked in the back of the 760 feet level north, in which the lode averages 2 feet 4 inches in width and 1 ounce 4 dwts. in assay value. The 680 north cross cut east has been driven 23 feet, total distance 125 feet. A few stringers of quartz has been passed through. The lode in the stope in the bottom of this level is 1 foot 6 inches wide, assaying 17 dwts. 6 grains per ton. The intermediate drive north, above the 600 north, has been extended (during the month) 12 feet, total distance 60 feet. Lode 18 inches wide, assaying 5 dwts. 12 grains: There are two stopes in the back of the 600 north, in which the lode averages 1 foot in width, and assays 13 dwts. 12 grains per ton. In three stopes in the bottom of the 520 north the lode has an average width of 1 foot 6 inches, and assays 15 dwts. In one stope in the back of the 520 north the lode is 1 foot wide, assaying 13 dwts. There are two stopes in the bottom of the 370 north, in which the lode averages 1 foot 6 inches in width, and assays 8 dwts. per ton. Main shaft is being cut down to its full size between the 920 and 1000 feet levels, and as soon as the timber work has been completed, skip roads, &c., put in, sinking below the 1000 feet level will be proceeded with. Kennedy's shaft has been sunk 7 feet, total depth 579 feet, or 59 feet below the 520 level. The 520 south has been driven 20 feet 6 inches, total distance 255 feet 6 inches. Lode 3 inches wide, assaying 4 dwts. 6 grains. The rise in the back of this level against north shaft has been put up 10 feet 6 inches, total height 26 feet 6 inches. Lode 6 inches wide, assaying 7 dwts. 12 grains. The 520 north has been driven 22 feet 6 inches, total distance 246 feet 6 inches. Lode 1 foot 6 inches wide, assaying 6 dwts. 12 grains. The 440 south has been driven 46 feet, total distance 548 feet. Lode 2 feet 6 inches, assaying 2 ounces 5 dwts. The rise in the back of this level has been put up 22 feet 6 inches, and communicated with the 370 level. The lode averaged 2 feet wide, assaying 12 dwts. The 370 south has been driven 33 feet, total distance 343 feet. Lode 1 foot wide, assaying 10 dwts. 18 grains. The 370 north has been driven during the month 20 feet, total distance 361 feet. Lode 4 feet 6 inches wide, assaying 1 ounce 12 grains per ton. The 370 north crosscut west has been driven 14 feet 6 inches, total distance 89 feet 6 inches. No change. The lode in the stope in the bottom of this level is 7 feet wide, assaying 1 ounce 8 dwts. 6 grains. There are two stopes in the back of this level, in which the lode averages 1 foot 6 inches in width, and assays 13 dwts. 12 grains per ton. In the 300 north No. 1 rise and stope, the lode is 1 foot 6 inches wide, and assays 2 ounces 11 dwts. per ton. In the 300 south there are two stopes in the back in which the lode averages 1 foot in width and assays 1 ounce of gold per ton.—The 160 north intermediate level has been driven during the month 6 feet, total distance 189 feet. Lode 6 inches wide, assaying 17 dwts. 6 grains.—The 160 north rise has been put up, during the month, 7 feet, total height 7 feet. Lode 3 feet 6 inches wide, assaying 16 dwts. 6 grains. In the No. 1 stope in the back of this level the lode is 1 foot 6 inches wide and assays 9 dwts. 18 grains. The 95 north intermediate drivage has been extended 6 feet, total distance 15 feet. Lode 1 foot 6 inches wide, carrying a trace of gold.—Old Mill samples. Rough quartz through stone breaker, 1 ounce 12 grains; smalls, 1 ounce 1 dwt. 18 grains. —New Mill samples. Rough quartz through stonebreaker, 1 ounce 9 dwts. 6 grains: smalls, 1 ounce 6 dwts.

QUEEN'S BIRTHDAY UNITED.—The following is extracted from the mine report received from the company's local secretary, Mr. W. T. Hansford, dated Dunolly, September 17: Queen's Birthday Mine, 700 foot level main shaft. We find that the stone we struck at face last reported, is fortunately not the lode, as behind it we have slate country, quartz leaders, &c., all going east. We are glad of this change. We now intend putting on men at the crosscut west, also to start clearing out the 600 foot level, where we know there is gold.—Centre shaft, 300 foot level. No improvement to report here during the past fortnight, the payable stone has apperently cut out. It is only by extending the levels that we can thoroughly prove the ground.—Belgium and Perseverance. Water in crosscut 200 foot level very heavy, work here being temporarily suspended. Main level extended 23 feet, leaving about 20 feet more to take us under winze started from the 120 foot level; 45 feet further sinking will then put us through, when we shall know if we are on the course of the lode.—Gold returns: Since my last we have obtained 50 ounces 6 dwts. gold from the treatment of 170 tons quartz, from Belgium, North Birthday, and Centre shafts.

QUEEN CROSS REEF.—Copy of manager's report for fortnight ending September 4: Since last report the contractors, Davis and party, have sunk the vertical shaft 11 feet, and timbered up 73 feet, which finished their contract and 4 feet 6 inches over. The total vertical depth is 932 feet 6 inches, and 37 feet below the timber. At this depth we cut through a reef about 2 feet thick, coming in from the southern end of the shaft of rather poor quality, and there is still soft formation under the reef.—Brunskill and party: Tributors have finished a crushing of 174 tons for a yield of 173 ounces of gold. Barrett and party are doing very well, having about 4 feet of stone to work on. All the other tributors are doing fairly well. Everything in connection with the mine is in good working order.

SOUTH-EAST MYSORE.—Fortnightly report of Captain M Scantlebury, mine agent, dated October 3: Beresford's shaft. This shaft has been sunk 11 feet 3 inches, which now makes a depth of 259 feet 9 inches from surface. The lode is 4 feet wide, composed of quartz and arsenical pyrites. A sample has been taken from every blast, which has varied in value from 3 dwts. to 1 ounce 6 dwts. of gold to the ton. 200 feet level north has been advanced 17 feet 6 inches, now 165 feet 6 inches from shaft. The lode is 2 feet 6 inches wide, composed chiefly of quartz; several samples have been taken, which have varied in value from 12 grains to 8 dwts. of gold to the ton, Rise above the 200 feet level north has been put up 12 feet 3 inches, now 24 feet 3 inches above the level. The lode is 3 feet 6 inches wide, composed chiefly of quartz. Eight samples have been taken, which have varied in value from 6 dwts. to 1 ounce 19 dwts. of gold to the ton.—New engine shaft north of Beresford's. This has been sunk 7 feet, which now makes a depth of 84 feet from surface. We have also very nearly completed the timbering and cutting down to the bottom. The rock is fairly hard in the bottom. We shall erect the winding engine as soon as possible, and put rock drills in this shaft when it is erected. This shaft must be pushed down, and communicated with the 200 feet level from Beresford's in order to stope the lode to advantage.—Pigott's shaft. The shaft to the south of this going down in the old workings has reached a depth of 61 feet. The old workings are 4 feet wide, and dipping west at an angle of 60 per cent. from the horisontal.—Stamps. I hope to make a start to-morrow.

SUTHERLAND REEF.—Mine manager reports, September 27 Main shaft. This has been sunk further 14 feet, making a total of 242 feet from surface. I am very pleased to say that the reef is very fine at the bottom of the shaft—about 3½ feet wide. Some of the rock coming up shows visible gold freely. Our agents have advised this mail that the whole of the pumping machinery and a portion of the pipes have been dispatched from Johannesburg, and that they hope to have 24 wagons loading this week with the battery.

TOLIMA.—The directors have received advices by the mail of October 22, from their mines, of which the following is an abstract: Frias estimated August returns (143 tons) silver valued at 29d. per ounce, £6306 7s. 1d.; ditto cost, £3904 11s. 10d.; profit, £2401 15s. 3d. The underground agent reports 101 fathoms 3 feet 9 inches of ground expended, of which 81 fathoms 1 inch were productive, leaving of unproductive ground 20 fathoms 3 feet 8 inches. The superintendent's remarks at the date of the despatch of this mail on September 18 have been, as regards the value and the appearance of the exploratory ends, superseded by the cable advices received on the 3rd inst., and now in the hands of the shareholders, which report the 120 east end as worth £240 per fathom, and the 140 prospecting winze as yielding ore assaying £120 per fathom. The superintendent reports that the new 6 inch plunger pump had been working from the 130 fathom level since September 3, and that the mining operations in depth would be greatly facilitated thereby, and the sinking of the engine shaft proceeded with without further interruption.—Engine shaft. This shaft was sunk 5 feet, thus making 34 feet as total depth below the 130 fathom level. During the early part of the month sinking was suspended in order to fix the new 6 inch plunger at the 130 fathom level. And to date of writing I have much pleasure in stating that the plunger and all adjuncts are fixed and in good working order, and it is now pumping direct from the 130 to the 90 fathom level. We are now preparing to put in the small air winch to draw the stuff from the shaft, so that in the course of a few days we hope to be in a position to resume sinking.—140 fathom cross cut to north branch. This is situated just 9 feet west of the winze, and was driven 15·5 feet by four men, at $90 per fathom, and at this point it intersected the north part of the main lode, and same yields some nice bits of mineral, and upon which (north branch) we are driving for current month. 140 fathom east end was driven 22 feet by four men at $80 per fathom, thus making 161 feet as total east of the winze. The lode has yielded 15 cwts. of mineral per fathom, but of late the mineral has been irregular, and at present the forebreast is rather poor, although the lode keeps well defined, and the prospect on the whole may yet be considered as favourable to further improvements. 140 fathom cross cut to engine shaft was driven 6 feet by four men on company account. The object of this is to communicate with the engine shaft at this level. 130 fathom west end was driven 14 feet by two men at $70 per fathom, thus making 336·2 feet as total west of the winze, and the lode remains without change to note. 130 fathom west back stope No. 1 was stoped 56 feet by eight men at $40 per fathom, and yielded 2 tons of mineral per fathom. 130 fathom west back stope No. 2 was stoped 51·3 feet by six men at $26 per fathom, and yielded 1½ ton of mineral per fathom. 130 fathom east back stope was stoped 33·7 feet by four men at $25 per fathom, and yielded 1 ton of mineral per fathom. 120 fathom west back stope No. 1 was stoped 26 feet by four men at $30 per fathom, and yielded 3 tons of mineral per fathom. 120 fathom west back stope No. 2 was stoped 29 feet by two men at $24 per fathom, and yielded 5 cwts. of mineral per fathom. The mineral here has failed, and it is now suspended. 120 fathom east end N.B. was driven 12·7 feet by two men at $70 per fathom, and the lode much improved towards the end of the month, and it yielded on an average 15 cwts. of mineral per fathom. 120 fathom east back stope No. 1 was stoped 24 feet by four men at $33 per fathom, and yielded 15 cwts. of mineral per fathom. 120 fathom east back stope No. 1a was stoped 6 feet by two men on company account, and yielded 2 tons of mineral per fathom. 110 fathom east end was driven 11·3 feet by 2 men at $58 per fathom, thus making 811·9 feet as total east of the engine shaft, and the lode yet remains poor. 110 fathom east rise was risen 7 feet by 2 men at $75 per fathom, and is holed to the 90 east winze. 110 fathom east back stope No. 1 was stoped 51·5 feet by 4 men at $24 per fathom, and yielded 4 tons of mineral per fathom. 110 fathom east back stope No. 3 was stoped 41·3 feet by 2 men at $25 per fathom, and yielded 2½ tons of mineral per fathom. 110 fathom east bottom stope was stoped 32 feet by 2 men at $20 per fathom, and yielded 2 tons of mineral per fathom. 100 fathom east bottom stope was stoped 49·3 feet by 4 men at $25 per fathom, and yielded 1 ton of mineral per fathom. 100 fathom west sink N.B. was sunk 9 feet by 4 men at $90 per fathom, thus being 28 feet as total depth, and the lode yielded 1½ tons of mineral per fathom. 90 fathom east end was driven 10 feet by 2 men at $70 per fathom, thus being 922·3 feet as total east of the engine shaft, and the lode remains without change to note. 90 fathom east rise was risen 19 feet by 4 men at $66 per fathom. It is situated just above the 90 east winze, and the first 15 feet was risen through a good lode that yielded at the rate of 2 tons of mineral per fathom; but the remaining portion was poor. 90 fathom east end Welton lode was driven 19 feet by two men at $70 per fathom, and the lode remains unchanged. 80 fathom east stope was stoped by two men 28 feet at $24 per fathom, and yielded 2 tons of mineral per fathom. Shallow adit was driven 20·1 feet by four men at $60 per fathom, thus being 138 feet as total west of the cross cut. The lode has become harder to work, and is letting out a good deal of water. West end from new cross cut was driven 11·75 feet by two men at $75 per fathom, and the lode remains unchanged—Real de Frias. West shaft was sunk 24 feet by eight men on company account, thus making 157·5 feet as total depth below the sole of the deep adit. The lode is yet well defined, and continues to yield here and there some good stones of mineral, and the prospect yet holds good for further sinking. Deep adit west was driven 10·2 feet by two men at $38 per fathom, thus making 565·21 feet as total west of the shaft, and the lode is without change to note.

TRANSVAAL GOLD EXPLORATION AND LAND.—Extracted from general manager's advices, dated September 27: Kameel's mill. The plate tables were nearing completion. The viaduct for conveying ore to the breaker was well forward. The ore feeders were connected by iron shoots with the ore bins.—New cyanide works. The masons had begun the work of building on September 24. —Mining. The work at the mines was proceeding as usual.—Prospecting. The deposit had been found across the creek from Beta Mine, but it was very uneven and irregular. In one place it had a milling value—by dry crusher and pans—of 4 ounces to 5 ounces per ton. At Ihta, in one of the drives the deposit was well defined, 18 inches thick, and strong looking.—Government concession. A committee appointed by the Volksraad had just reported on the mining concessions of the Transvaal. The report regarding this company's concession states that we have fulfilled all our obligations.

VICTORY (Charters Towers).—Copy of manager's report for fortnight ending September 8: No. 1 shaft. Have been stoping over No. 11 level on 3 to 15 inches good stone; reef now in face about 9 inches. Have cut chamber, fixed winch, and will be ready to start sinking winze on Papuan reef next week. Raised from this shaft during fortnight 35 tons.—Worcester shaft. Drive from crosscut extended 25 feet along formation, total 37 feet, last 12 feet driven carried no stone. Stoping above on 3 to 30 inches, some of which is of good quality. Raised 35 tons.—No. 2 shaft. Underlie sunk 13 feet, total 383 feet. Reef here is cut out, but formation keeping good. Stoping from shaft below No. 6 level on 3 to 15 inches white stone. No. 6 level driven 13 feet, total 128 feet; shows 12 inches fair stone in face. Stoping over this drive on 6 to 30 inches medium quality, and over No. 5 level on 3 to 15 inches poor. Crossdrive in No. 4 east extended 15 feet, total 247 feet. Still driving in formation, but have no sign of reef yet. Rise in No. 3 east up 55 feet, reef averages 15 inches, quality medium. Started sinking winze in end No. 2 east level to meet rise; down 9 feet on 3 inches stone. Stoping over No. 1 A west on 12 inches and underhand stoping on 2 feet; some of it is well mineralised and some poor. Raised 205 tons.

UNITED GOLD FIELDS OF MANICA.—Return of mining work done during the two weeks ending September 8: Adit No. 1, Distance driven 5 feet, total length 577½ feet. Rock very hard schist. Miner also sharpens all tools, and has cut up 10 bars of steel for drills to be used for night shift next week.—Adit No. 3 winze. Six sets of timber used; replaced roof and sides lagged. Fixed platform in shaft above water, and timbering winze. Drift to east on reef from bottom of winze commenced, and driven 3 feet.

WANTED.

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MINERAL RESOURCES OF THE UNITED STATES.

IRON ORES.

By JOHN BIRKINBINE.

(*Continued from page* 1146.)

Stocks of Iron Ore at Mines.

THE stocks of ore on hand December 31, 1892, aggregating 2,911,740 long tons, increased 614,421 long tons, or 21·10 per cent. during the year 1893, reaching a total of 3,526,161 long tons reported on December 31, 1893. This represents 30·43 per cent. of the total production of the United States for the year 1893. As would naturally be expected, the largest stocks on hand were of ores from the Lake Superior region, the bulk of the production being sent as mined to lower lake ports by water. During the suspension of navigation in the winter months the ore on hand at mines accumulates, and on the stock piles of the States of Michigan, Minnesota, and Wisconsin there was on December 31, 1893, 2,594,438 long tons, or 73·58 per cent. of the total stocks reported for the United States. But this proportion may be more apparent than actual, because accounting of stocks is not practical elsewhere as a rule. Some mines, operated by blast furnace companies for the supply of their plants, keep no record of stocks; in other cases the quantity of ore accumulating is determined by skip roads which are hoisted from the mine. However, allowing for discrepancies elsewhere, it is evident that the Lake Superior mining companies carried the bulk of the stocks of ore at mines, in addition to the liberal amounts held at receiving docks on Lake Erie, and that there was at mines throughout the United States at the close, approximately, one-third of all the ore mined during the year.

Lake Superior Ore Shipments.

It has been shown in previous reports that the Lake Superior region is the most important iron producing district in the country, and that most of its ore is sent by water to lower lake ports where large receiving docks act as distributing mediums to blast furnaces. As shipments can only be made by water during seven or eight months of the year, it necessarily follows that enormous stocks of ore accumulate on the docks of these distributing points towards the close of the shipping season, and often considerable amounts remain on hand at the opening of navigation, the stocks exerting an important influence on the iron ore market.

The ports from which iron ore is shioped have received an addition in Duluth, Minnesota, which made its initial shipment this season, and it is probable that in the future this harbour, which receives ore from the Mesabi range, will increase its shipments. As will be seen, Escanaba, Michigan, still holds first rank, but the amount of ore sent forward from that port represents but little more than half of the trade credited to it in 1892. Ashland, Wisconsin, fell off in nearly the same proportion, while Marquette, Michigan, was the only one of the older shipping ports which showed increased shipments.

As an example of quick work, and to supplement the statistics furnished in previous reports, the following data are presented concerning the new iron ore shipping dock of the Duluth, Mesabi, and Northern Railway Company at Duluth, Minnesota. The dock is 2340 feet long, 52 feet wide, 53 feet high above the water line, and has 384 pockets, having a storage capacity of 150 tons each, a total of 57,600 tons; 8000 piles and 10,000,000 feet of lumber were required for its construction. The first pile was driven January 20, 1893; the first ore was received July 22. Using but 200 pockets, the shipments up to November 20, 1893, were 430,000 tons. It is not an uncommon occurrence to load a boat with 2000 tons of ore in one hour and 30 minutes. The cost of the dock complete was $425,000.

Lake Erie Ore Receipts.

The difference between the Lake shipments and the amount received at the lower lake ports represents the iron ore sent to Chicago, Milwaukee, and other points having blast furnaces, accessible by water transportation.

The greater portion of the iron ore brought through the Great Lakes goes to Ashtabula and Cleveland, Ohio.

The figures given of stocks held at mines added to those carried at lower lake ports make a total of 6,665,148 long tons, which exceeds the entire amount mined in the States of Michigan, Minnesota, and Wisconsin in 1893. But as the stock at the lower lake ports was taken on December 1, the amount on hand December 31, 1893, was slightly less, making the stocks of Lake Superior ores held by mineowners or their agents as that date very close to the 1893 output of these States.

The receipts of ore at lower lake ports were less than in 1889, 1890, and 1892, but greater than they were in 1891, while the stocks of ore on hand December 1, 1893—viz., 4,070,710, are the largest on record, with the exception of last year, when there were 4,149,451 long tons on hand. How much of this stock of ore on hand is practically sold cannot be definitely estimated, but the bulk of that unsold is stated to be of non-Bessemer grades. During 1893 a larger proportion than usual of the ore brought down was shipped direct to the furnaces, advantage being taken of the rebate given where ore does not go upon the dock.

Stocks at Ore Docks.

The stock of ore on hand at the opening of navigation, May 1, 1894, was larger than any previous year except 1891, being 2,588,370 long tons as against 2,095,797 long tons in 1893, and 1,537,188 tons in 1892.

Deducting the stock of ore on hand May 1, 1894, from the stock on hand December 1, 1893, the winter shipments to furnaces appear to have been 1,482,340 long tons.

The shipments to furnaces during the season of navigation amounted to 3,358,148 long tons, which added to the shipments as above when lake traffic is suspended, makes the total shipments of Lake Superior ore to furnaces during the year ending May 1, 1894, 4,840,488 long tons; the lowest amount sent forward since the year ending May 1, 1889.

(To be continued.)

Two caravans with gold and silver have arrived at St. Petersburg from Siberia. One caravan with gold from private gold-washings, came from Tomsk, and the other, with silver and gold, from the Kronsberg Mines, from Barnaul. Both of these valuable consignments have been handed over to the St. Petersburg Mint.

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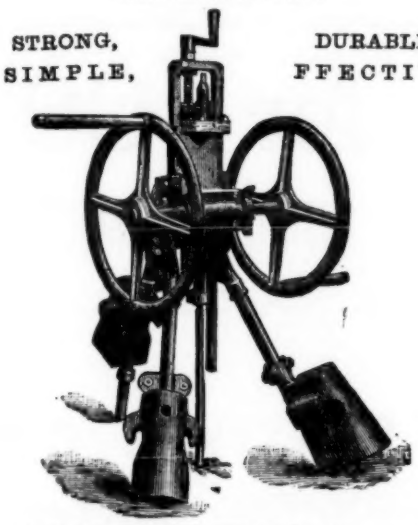

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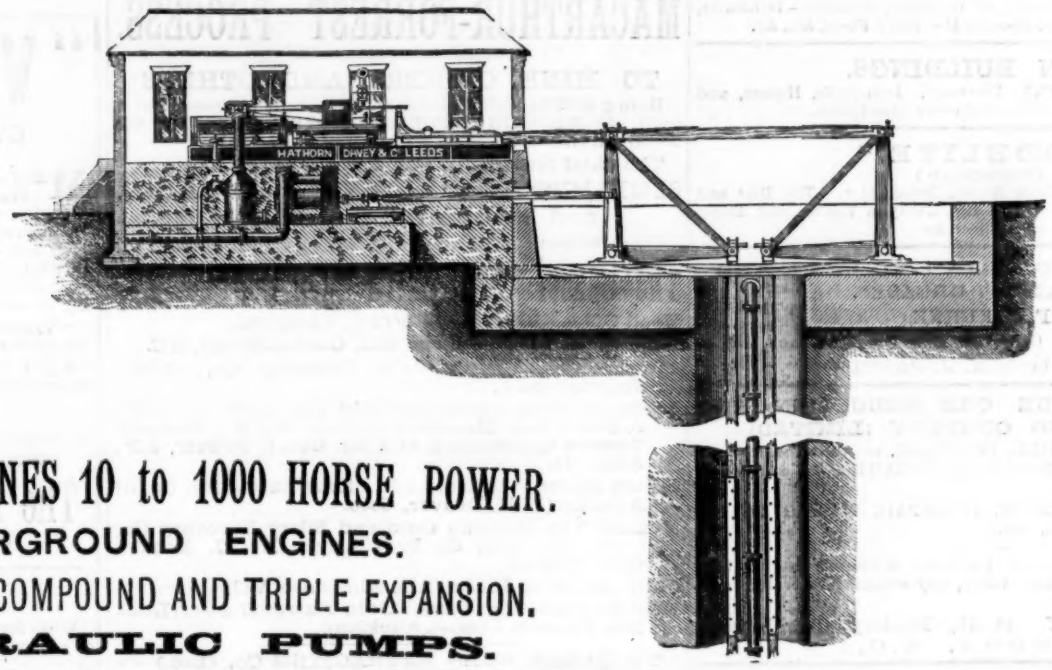

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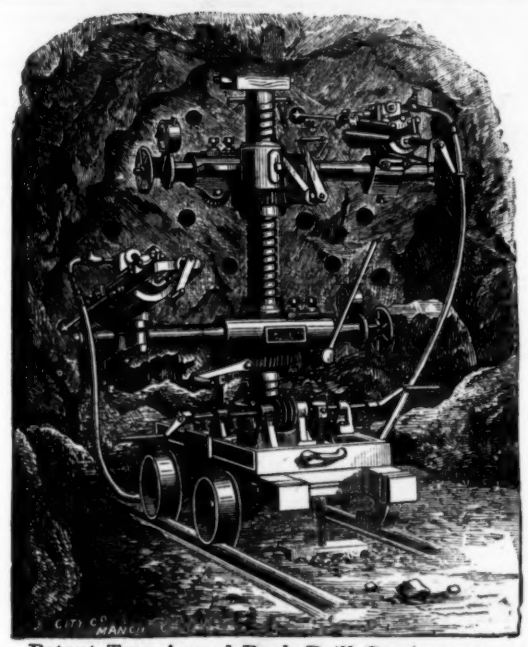
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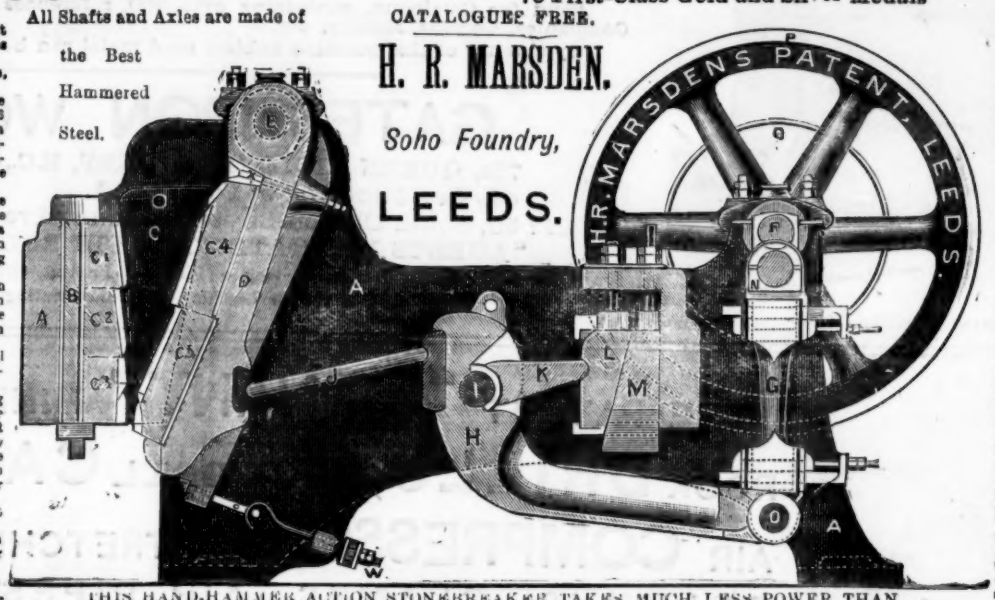

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"I am sure the machine will be a success, and a great one, and there is any amount of demand for such a machine. We can work it with 20 lbs. of steam and our engine, which is a 12-h.p., plays with the work, in fact we run the Stonebreaker and the Pulverizer both together with 35 lbs."

STONEBREAKERS AND ORE CRUSHERS.

TESTIMONIALS.

"We have great pleasure in testifying to the efficiency of the 15 in. by 8 in Lever Hand Hammer Motion Stone Breaker you supplied us with. We find that our 4 h-p. Engine with ease drives it 250 revolutions per minute, and breaks six ton per hour of the hardest "Diorite" Whinstone: the sample is much before any hand-broken we have ever got done. Our Mr. P. J. GRAHAM, C.E., who was Surveyor of Highways for ten years, before joining our firm, says: It is by far the most economical machine he ever had to do with; he had two of your former make, and two of another firm's make; compared with these four machines your new patent gives the following advantages:—The horse-power required to drive is exactly 40 per cent. less. The sample of the broken macadam is so far superior to that broken by other machines, and even to that broken by hand that we can make no comparison. It is by far the best sample we have ever seen."

"I now order three of your Stone Crushers, size 15 by 10, to be of your very best construction, and to include two extra sets of Jaws and Cheeks for each. The last two 24×13 machines you sent me, which are at work in this colony, are doing very well. You will soon find that the railway contractors will adopt your machines in preference to the colonial ones—two of which I have. I know other contractors have had as many as nine of them, which have not given very good satisfaction. Once they know of yours thoroughly, I believe you will do a good trade with the colonies. For reference of the high character of your constructions you can refer to me as having used them with the very best results, both in New Zealand and this colony, and much prefer them to the colonial article, both in point of construction and less liability to go out of order. The material we are crushing is very hard blue stone, for railway ballast purposes. Push on with the order as quickly as possible; I do not think it necessary to have any engineering inspection. I have brought your machines prominently under the notice of all large contractors in this colony, likewise the Government. Many of the contractors have spoken to me in reference to their capabilities, and I could only tell them that they are by far and away the best and most economical I ever used. The very fact of me having purchased eleven from you at various intervals and various sizes, and two above 12 years ago, and having tried all the other makers is sufficient guarantee of the capabilities and the working of your machines. Yours in every way surpass all others."

BENNETT'S

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FUSE.

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A Distinguishing Feature in these Goods is THREE SEPARATE CENTRE THREADS IN THE COLUMN OF POWDER. The make may always be recognised by these Threads, and users are cautioned to look for them and see that they have the Genuine Article.

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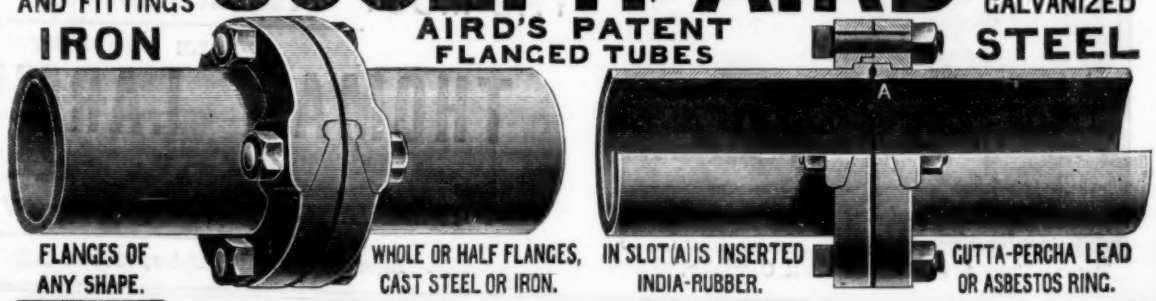
AIRD'S PATENT FLANGED TUBES

ALL SIZES PLAIN OR GALVANIZED STEEL



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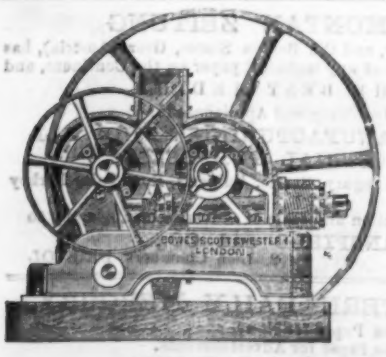

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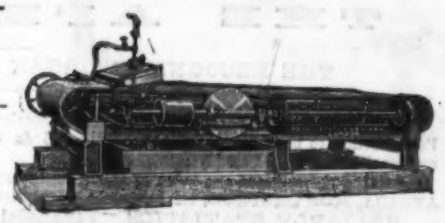

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FOR FINE CRUSHING.

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